DOCUMENT RESUME

ED 094 290 88 CG 009 063

TITLE	Educational Programs That Work. A Catalogue of Demonstration Sites of Successful Educational Programs Developed Through the Elementary and Secondary Education Act Title III in New Jersey. 1973-74 Edition.
INSTITUTION	New Jersey State Dept. of Education, Trenton. Office of Program Development.
SPONS AGENCY	Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
PUB DATE	Sep 73
NOTE	97p.
EDRS PRICE	MF-$0.75 HC-$4.20 PLUS POSTAGE
DESCRIPTORS	*Catalogs; *Educational Innovation; *Educational Programs; Elementary Schools; *Problem Solving; *Program Descriptions; Secondary Schools; *Special Programs
IDENTIFIERS	*Elementary Secondary Education Act Title III; ESEA Title III; New Jersey

ABSTRACT

The programs presented in this catalogue have been evaluated as substantially meeting the objective of finding solutions to educational problems. Each program was developed and disseminated by funding from Title III monies and offers a demonstration site for New Jersey educators and laymen. Staffs involved in 11 different programs offer dissemination materials and services, including training and consultation for elementary and secondary personnel. Among the innovative programs are: Early Childhood Education Project; Educational Services for School Age Parents; Individualized Language Arts; LEM-Learning Experience Module; Open Classroom; Pollution Control Education Center; and Prescriptive Teaching Workshop. An overview of each project is presented along with the goals, evaluation, designs, and final results. (Author/PC)

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ESEA

educational programs that work

a catalogue of demonstration sites of successful educational programs developed through The Elementary and Secondary Education Act Title III in New Jersey

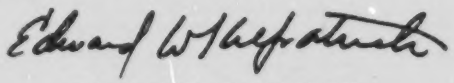
1973-74 edition

CG 009 063

EDUCATIONAL PROGRAMS THAT WORK

1973-74 EDITION

The projects presented herein have been evaluated as substantially meeting the objective of finding solutions to educational problems. The materials should have relevance for many school districts.



EDWARD W. KILPATRICK
Acting Commissioner of Education

The programs described in this catalogue have been evaluated as innovative, successful, cost-effective and exportable by the New Jersey Department of Education. This evaluation has been validated by the guidelines and standards of the United States Office of Education.

Each program is funded for 1973-74 to be a demonstration site for the citizens of New Jersey. The program staffs offer dissemination materials and services, including training and consultation, to New Jersey educators and laymen.

The development and dissemination of these programs is carried out with funding from the Elementary and Secondary Education Act, Title III.

Office of Program Development
Division of Research, Planning and Evaluation
New Jersey Department of Education
225 West State Street, Trenton, New Jersey 08625
SEPTEMBER, 1973

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ELEMENTARY AND SECONDARY EDUCATION ACT
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INTRODUCTION

The purposes of the Elementary and Secondary Education Act, Title III (1965) are the development and dissemination of innovative educational programs. To fulfill these purposes, New Jersey receives approximately three and one-half million dollars annually. The funds are allocated by the Department of Education to a limited number of school districts. In addition, the department staff provides to the staffs of local districts consultation in planning, managing, and evaluating innovative programs. These programs receive Title III funding from one to three years with the expectation that local Boards of Education will assume support of successful programs.

Following development, the next step is to have successful ideas and programs widely adopted or adapted. The Title III statewide dissemination effort fulfills the second purpose of the enabling legislation by funding successful projects as demonstration sites. The overall goal of the dissemination effort is to establish enough models of a successful program to secure continuing dissemination for an unlimited period of time. Only through such dissemination will the maximum educational gain of these programs and the full return on the Title III development dollar be realized.

The New Jersey ESEA, Title III statewide dissemination effort includes provisions for the selection of programs for dissemination, development of materials and services for demonstration sites, and evaluation of the adoptions or adaptations of model programs. In most cases, a demonstration site will operate for three years with the goal of training educators from twenty to fifty schools or districts throughout the state.

Successful Title III programs are identified by the following characteristics:

Innovative:	Exists in less than 5% of New Jersey school districts.
Successful:	Has met educational goals of making a significant change in the behavior of the target population.
Cost-effective:	Minimal start-up and maintenance costs fully justified by program results.
Exportable:	Replicable in another school or district through the ESEA, Title III statewide dissemination program.

The programs' initial selection is the work of the Department of Education staff. Independent evaluators are employed as consultants to validate the projects' meeting each criterion for selection according to the guidelines and standards of the United States Office of Education.

DEMONSTRATION SITES - THE PRODUCERS

The operating plan of most demonstration sites is based upon a producer-consumer model. The staffs of the demonstration sites are "producers" who make a program available to "consumers". To do this, the producers inform educators and laymen about their program and its evaluation, invite visitors to see it in action and examine its materials, and offer training services and follow-up consultations to interested parties. Materials are available free or at cost. Training services and consultations are offered at no charge to consumers. Consumers are responsible for stipends, or other costs which they incur to take the training and install and evaluate the program. To qualify for training, consumers must give evidence of intent to use the training and willingness to respond to questionnaires on the use and the impact of the materials and training.

One other dissemination format is in use. The materials developed by one project, Pollution Control Education Center, are being published and distributed by a commercial firm. As a result, the program's materials are available to educators throughout the nation under terms and conditions approved by the New Jersey Department of Education.

The New Jersey Department of Education supports these dissemination strategies by mailing information about the demonstration sites to educators and reference libraries throughout the state. In addition, this information is sent to the Educational Research Information Center (ERIC), the ESEA, Title III President's National Advisory Council and state education agencies throughout the nation.

In 1973-74, there are eleven demonstration sites of successful New Jersey Title III programs. The programs and their dissemination plans are described in this catalogue. For more detailed information about them, please contact the staff of the demonstration sites, or the Office of Program Development, New Jersey Department of Education.

NEW JERSEY EDUCATORS AND LAYMEN - THE CONSUMERS

At least three types of consumers will be interested in the demonstration sites: educators and laymen of local school districts and private schools, Department of Education staff who are consultants to local school districts, and faculty members of teacher training institutions. Each is welcome to visit the demonstration sites and invited to take part in all aspects of their dissemination activities. Only through these consumers can the New Jersey ESEA, Title III program reach those whom it is designed to serve: the children of New Jersey.

The Title III demonstration programs are models in which the specific requirements of a different site will call for modifications. Those who are assessing the appropriateness of a demonstration program for another setting are urged to consider several steps of the development process to make a decision. First, the needs of another school or district must be clear. To meet these needs, specific goals for a new program should be set up. The program selected to fulfill these goals must accommodate the characteristics of the community, students, and staff. A new program should also have a minimal maintenance cost after the initial start-up investment. In many cases, current expenditures can be reallocated to prevent an increase in operating costs. Finally, a new program should be evaluated to determine the extent to which its goals are being met.

Following this procedure, one should assess the suitability of a demonstration program for another school or district with respect to the needs, goals, population, and resources of the proposed site. Only if this study shows that the program's replication or adaptation is appropriate and feasible should the planning for its transfer begin. These steps have proven fundamental to the development of successful Title III projects in New Jersey. For this reason they are recommended to accompany the dissemination of the demonstration programs.

Dale Avenue Urban Early Childhood Education Project

Paterson, New Jersey

OVERVIEW

The project staff has developed a performance objective curriculum for urban, educationally disadvantaged students. The mean I.Q. of the students who have followed this curriculum for three to three and one-half years has been raised from 82 to 100. These students also score at grade level in reading and mathematics on the Stanford Achievement Test. The curriculum has been developed and tested in the Dale Avenue School which is an ESEA, Title I school in Paterson. The school's approximately 600 students are 63% Black, 19% White, 17% non-English speaking, and 1% Oriental. Students enter the school in Pre-Kindergarten for a five year program which takes them through the third grade.

Educationally disadvantaged students typically come to school without the basic skills, especially in standard English, that produce academic success. As a result they normally fall significantly below grade level in reading and mathematics, and usually have frustrating experiences in other subjects as well. Using the performance objective curriculum, teachers at the Dale Avenue School have reversed the typical failure pattern. The development of this program began in 1969-70 and was carried out through a Title III grant from 1970-71 through 1972-73.

The Dale Avenue curriculum is a series of performance objectives, sequentially ordered, in listening, naming, observing, speaking, perceptual motor skills, writing and motor skills, classification, mathematics, decoding, and seriation.

The project and teaching staff develop lessons to teach the skills and tests to assess skill mastery. Students are taught one skill in each area simultaneously. They begin learning a new skill in each area only after mastering the previous one. As the students move from one grade to the next, their skill mastery record moves with them. Teachers therefore can maintain the continuity of the curriculum's developmental sequence. The performance objective curriculum is appropriate for skill development through the end of the third grade.

On entering the Dale Avenue School each student is given three tests to assess the level of his skill development. The tests' results permit teachers to individualize instruction within the performance objective curriculum. A Skill Assessment Test shows how well a student can name and label, rote count, assign a number to a set of objectives, and see likes and differences. An Identity and Body Parts Test assesses what a student knows about himself. Testing on the performance objectives specifies the level of each student's development in the ten skill areas.

Instruction is carried out on an individualized basis and in small and large groups. Each student proceeds at a rate comfortable to him or her through the performance objectives. An essential part of the educational program is the 45 minute per day reading period when students are taught in small groups organized according to reading abilities. Most teachers work in self-contained classrooms. Specialists and aides are also on the staff.

The parents of the Dale Avenue School's students have a strong organization. They volunteer to be teacher aides, work in the library, conduct guests through the school, and inform the community about the program. The Parent Coordinator is a salaried member of the project staff.

GOALS, EVALUATION DESIGNS, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1

To bring the average academic performance including I.Q. of urban, educationally disadvantaged children up to the national norm and maintain this gain for three years.

Before an examination of the evaluation designs and results, it is important to know the sequence in which the performance objective curriculum was introduced into the Dale Avenue School. In 1969-70 the performance objectives were used during part of the year in Pre-Kindergarten. In 1970-71 the program was followed in Pre-Kindergarten and Kindergarten; in 1971-72 the program was expanded to include the first grade and in the middle of the year was introduced to the second grade. In 1972-73 the program was followed in all grades: Pre-Kindergarten through third. In 1972-73 the students who completed the first and second grades had followed the performance objective curriculum virtually throughout their school careers. The students who finished the third grade, however, had been in the program for only one and one-half years.

The 1972-73 evaluation design had three parts. For the first a random sample of students; thirty each from the first, second, and third grades in the Dale Avenue School formed the experimental groups. For each grade level there were four control groups: two control groups from educationally disadvantaged populations, and two from educationally advantaged populations. The scores of the experimental and control groups on the Peabody Picture Vocabulary Test were compared for this year and this year's scores were compared to those for each group and for each year of the project's history.

The second part of the evaluation was indepth testing of first, second, and third grade students at the Dale Avenue School. A pre and post test design using a locally developed

test (the Performance Objectives) and a standardized test (Stanford Achievement Test) was followed. A standardized Child Behavior Rating Scale was given at the end of the year to see if behavior of the experimental groups matched achievement and I. Q. scores.

The third part of the evaluation program was monitoring the Pre-Kindergarten and Kindergarten students through random sample testing using the Peabody Picture Vocabulary Test, the project developed Skill Assessment Tests, and the Identity and Body Parts Checklists.

The test data indicate that while the Dale Avenue experimental first, second, and third grade groups do not attain I.Q. scores as high as those of the advantaged control groups, they do make significant gains from entrance into Pre-Kindergarten through Kindergarten and then maintain I.Q.'s that are at a national norm through first and second grade. The third level students made significant gains in I.Q., although not as significant as those of the first and second graders, from the time they entered the program through the end of the third grade, but did not reach the national norm. These third grade students have been in the Dale Avenue School since Kindergarten, and had attended a Pre-Kindergarten outside of the Dale Avenue School, but they had not used the performance objective curriculum until the second half of the second grade.

There were significant differences found between all Dale Avenue experimental groups (first, second, and third grades) and the disadvantaged control groups in the same grades. Previous testing had shown that students entering the Dale Avenue School and other ESEA, Title I schools in Paterson for their first year experience (for the Dale Avenue School students this is Pre-Kindergarten while for the others it is Kindergarten) have very depressed I.Q. scores which are well below the national norm and a developmental language age well below chronological age. All groups made significant gains the first year, although the Dale Avenue group did show greater gains. However, the second year of school (Kindergarten for the Dale Avenue School, and first grade for other Title I schools) the Dale Avenue students made additional gains that brought them to the national norm while the other Title I students simply leveled off and made little, if any additional gains. The Dale Avenue first and second grade students maintained these gains and remained at the national norm in I.Q. The other disadvantaged groups remained well below the national norm in I.Q. through first, second, and third grades.

I.Q. SCORES MEASURED BY THE PEABODY PICTURE VOCABULARY TEST

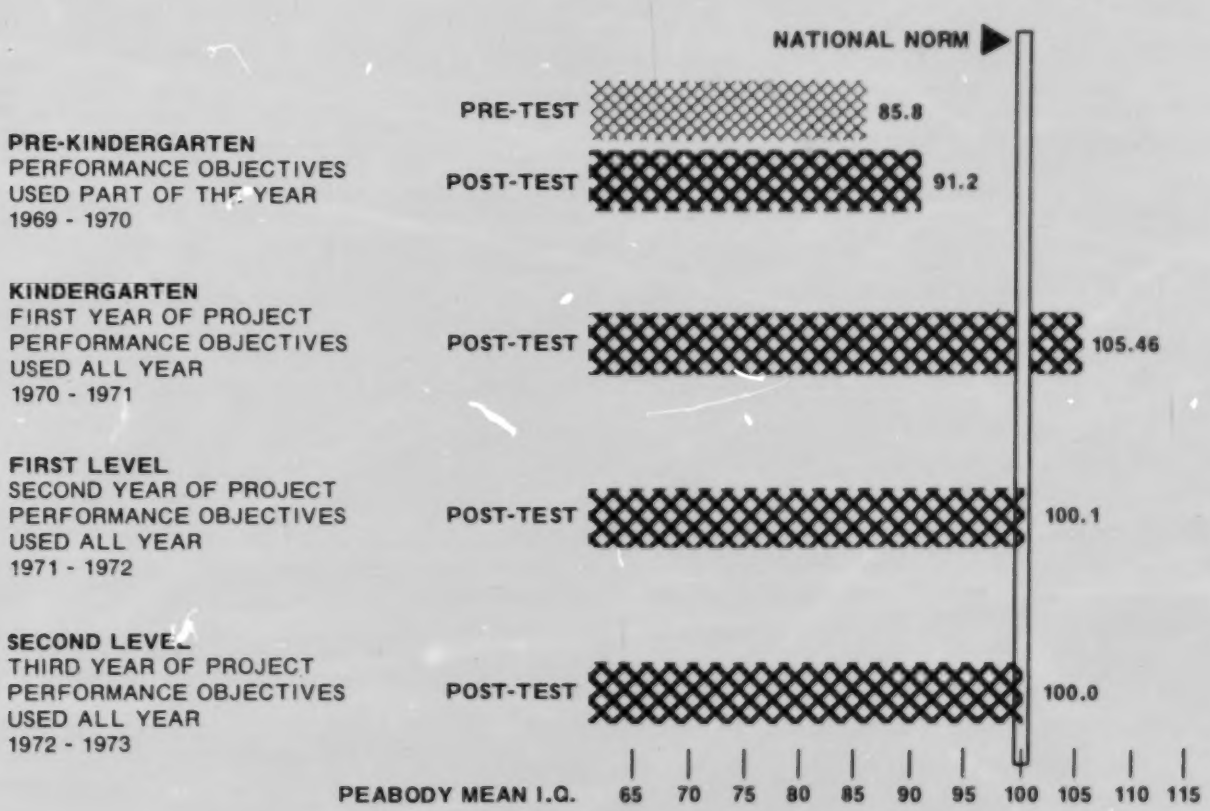
FOUR YEARS OF THE PERFORMANCE OBJECTIVE CURRICULUM

The children represented in this graph will complete the third grade at Dale Avenue School in June 1974. They entered Pre-Kindergarten in 1969, well below the national norm in mean I.Q. By the end of Kindergarten, 1971, they were at national norm. They maintained this position through the first and second grades, 1972 and 1973.

DALE AVENUE SCHOOL

Paterson, New Jersey

DALE AVENUE URBAN EARLY CHILDHOOD EDUCATION PROJECT



I.Q. SCORES MEASURED BY THE PEABODY PICTURE VOCABULARY TEST

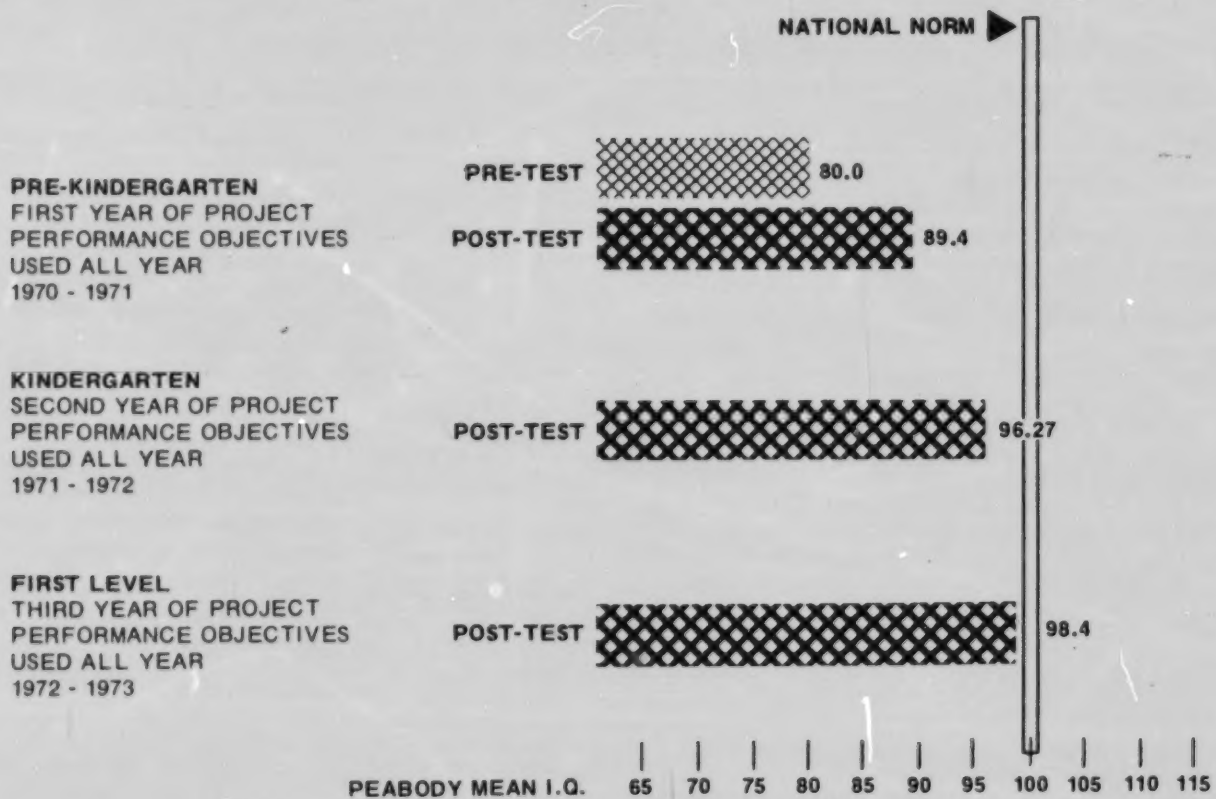
THREE YEARS OF THE PERFORMANCE OBJECTIVE CURRICULUM

The children represented in this graph will complete the third grade at Dale Avenue School in June 1975. They entered Pre-Kindergarten in 1970, well below the national norm in mean I.Q. By the end of Kindergarten, 1972, they were at the national norm. They maintained this gain through the end of the first grade, 1973.

DALE AVENUE SCHOOL

Paterson, New Jersey

DALE AVENUE URBAN EARLY CHILDHOOD EDUCATION PROJECT



The mean scores for the first, second, and third grade students in the Performance Objectives show gains in the skill areas of listening, naming, speaking, writing and motor skills, classification, mathematics, decoding, and seriation. By the end of the second grade all students were able to perform all of the perceptual motor skills. Although there were very few mean gaps in the first and second grades at Dale Avenue School, there were more in the third grade than in the other grades.

The results of the Stanford Achievement Tests showed that the first and second grade students were performing at grade level in reading and mathematics but that the third grade students were performing one year below grade level in reading and five months below grade level in mathematics.

The behavior rating charts that tested a random sample of the first, second, and third grade students' behavior followed the same pattern as the I.Q. and performance. The first and second grade students were just about at national norms and the third grade students charted below this level.

The monitoring of the sample of Pre-Kindergarten and Kindergarten students confirmed that the same thing has happened to the school's population year after year since the introduction of the Performance Objective Curriculum. The Pre-Kindergarten students made significant gains in I.Q., skill knowledge (Skill Assessment Test), and knowledge of themselves (Identity and Body Parts Test). They continued making gains in Kindergarten which brought them to the national norm in I.Q., skill knowledge, and knowledge about themselves.

Goal #2: Statewide Dissemination

To inform New Jersey citizens about the program and its evaluation. In 1973-74 to train the staffs of fifteen districts or schools in the adoption or adaptation of the use and evaluation of the Performance Objective Curriculum. Evaluation will be made through consultation and responses of consumer districts or schools to questionnaires on the use and impact of training.

COSTS

The major portion of the Title III grant for this project covered the salaries of the developmental staff, including those of two full time testers and the Parent Coordinator.

The cost of replicating the program is basically that of staff training, follow-up supervision, and evaluation. Provision must be made for the continuing help, encouragement, and support of staff.

The Performance Objective Curriculum, information about its evaluation, background information on the project in general, and the project designed tests, including those for the mastery of the performance objective skills, are available at cost from the project staff. The materials required to introduce the program will probably be found in most school districts.

After the initial start-up investment for staff training, the program's maintenance cost should not require an increase in the current operating expenses of most districts. Some districts may find that the use of the Performance Objective Curriculum will reduce the students' need for remediation. This, in turn, should represent a decrease in operating expenditures.

STATEWIDE DISSEMINATION PLAN

The project has been funded by Title III for 1973-74 to offer dissemination services and materials to New Jersey citizens. One day per week is set aside for visitors to the Dale Avenue School. General information about the project is free. Test kits and other materials required for the program's replication are available at cost. Members of the project staff are available to visit interested schools or districts to explain the program.

During the academic year, 1973-74, the project staff will offer to the staffs of fifteen schools or districts a 12 to 15 hour (two day) training program with follow-up consultation in the use and evaluation of the Performance

Objective Curriculum. Each district or school staff will be trained separately with special reference given to its needs and goals. The training will take place in the consumer district, at an Educational Improvement Center, or another site agreeable to both parties.

There is no charge for the services of the project staff. Consumer districts are responsible for costs incurred by their staffs for training and the installation of the program. To be eligible for training, a district must show evidence of intent to use the information and willingness to answer questionnaires to evaluate the use and impact of the training.

Inquiries about the project should be made in writing to the project director. Requests for a visit to the Dale Avenue School should be made in writing to the principal of the Dale Avenue School.

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The Elementary and Secondary Education Act, Title III funds the development and dissemination of innovative educational programs. Local education agencies may apply to the New Jersey Department of Education for Title III grants.

Educational Services for Schoolage Parents

New Brunswick, New Jersey

OVERVIEW

Pregnant teenagers and their offspring are high risk individuals, medically, educationally, and socially. Prematurity, as well as fetal, neonatal, and maternal mortality, occurs with greater frequency in this segment of the population. These teenagers often have an academic history of poor motivation, excessive absence, and truancy. Their educational prognosis is, therefore, usually poor. To combat this situation, a program has been developed at New Brunswick's Family Learning Center to provide educational, medical, psychological, and social services for pregnant teenagers and their infants.

The Center's staff works closely with many persons and agencies to identify pregnant teenagers. Once a student has been identified, the community counselor and the staff nurse visit her home to explain the services available at the Center and invite her and her family to the Center for an orientation.

While still attending regular classes, participants come to the Center for medical, dental, and social services and to begin preparation for a healthy prepartum experience. Within a short period of time, the girls cease going to their regular classes and come to the Center daily for academic work and instruction in family life education. After the birth of their babies, the students return to the Center for a final six weeks of instruction. During this time the pediatricians who work as consultants for the district visit the Center to examine the babies and talk to the mothers about the immediate and long term health care which the infants will require. This comprehensive program addresses both the educational and health care needs of the pregnant teenager.

Academic classes at the Center are small. Instruction is often individualized. Teachers know each student personally. Most of the subjects taught in the regular school program are offered. As a result, students do not fall behind in their school work. Normally, their grades improve. Most have graduated from high school, and several are attending college.

Family life education includes instruction in nutrition, food preparation, sewing, and consumer education. Two home economists are responsible for these classes, the purpose of which is not only to provide information and teach skills, but also to develop the students' pride in and appreciation of home and family life. A fundamental part of the program is the daily preparation of a limited breakfast and a full lunch at the Center. The Homemaking Specialist purchases the food supplies and supervises the preparation and serving. Students learn the most effective techniques of food preparation and cleanup. This activity also illustrates lessons of good nutrition and food buying. The students learn that a well balanced diet is important for their own health and that of their babies.

The second component for the family life education program is instruction in anatomy, physiology, and human growth and development. These classes are conducted by the staff nurse. The birth process is studied in detail. Students are trained in breathing and relaxation techniques which relieve tension and permit them to sleep better during pregnancy. They also visit the labor and delivery rooms of a local hospital. In anticipation of motherhood, they learn how to care for an infant and what kind of medical treatment, including immunizations, an infant should receive. The students leave this unit, the Center's director believes, with something special: a knowledge of the labor and birth processes, a freedom from fear of the unknown, and a new self confidence.

In addition to providing this instructional unit, the nurse makes certain that all of the students are receiving prenatal care from a private physician or through a clinic at a local hospital.

These instructional units are complemented by an individual and group counseling program for all of the students carried out by the community counselor. This helps the

students make a healthy social and psychological adjustment to pregnancy and the prospect of parenthood. The counselor also works with the students' teachers, families, and friends as required. The counseling is the final ingredient to the building of a supportive and accepting atmosphere at the Center.

The program was developed through a Title III grant from 1969 to 1972. It is now fully supported by the New Brunswick Board of Education. The Family Learning Center is housed in a building separate from others in the school system. The physical facilities include a kitchen in a large room which also serves as an instructional area and dining room. The program is the responsibility of the Director of Pupil Personnel Services.

The Family Learning Center serves forty to fifty students per year of whom twenty to twenty-five are enrolled at a single time. The staff includes two to four academic teachers employed on an hourly basis, a full time Homemaking Specialist, a Home Economist (50% time), the Pupil Personnel Services Nurse (75% time), a Community Counselor (85% time), pediatricians employed on a consultant basis, the Director of Pupil Personnel Services (15% time), and a secretary (25% time). Persons who work part time at the Family Learning Center normally have other responsibilities within the district. In addition, the services of the district's Child Study Team are available as needed.

Many individuals and voluntary organizations have contributed their services to the education and health care programs at the Center. These individuals include physicians and a nutritionist who have supplemented the instructional and health care programs. The fact that only four of the 135 babies born to students at the Center during a two and one-half year period were underweight is responsible for the program's inclusion by two of these volunteers in a study on the factors contributing to the favorable outcome of pregnancy among teenage mothers. Christian M. Hansen, Jr., M.D., College of Medicicine, Rutgers University, and Myrtle L. Brown, Ph.D., Department of Nutrition, College of Agriculture and Environmental Science, Rutgers University, are conducting the study which focuses upon the effect of nutrition on pregnancy and maternal maturation.

In this study the incidence of mothers bearing children of low birth weight (less than five pounds) in the New Bruns-

wick program is being compared to that of two similar populations in the state. In the latter two populations preliminary data indicate that the incidence of babies of low birth weight is approximately 10%. It is hypothesized that the lunch program and the psychological support which the students receive at the Family Learning Center contribute to the better obstetrical performance of these mothers compared to that of the other two groups. If indeed the program followed at the Family Learning Center contributes to healthier mothers and babies, this study will provide a sound basis for replicating programs of this type in other areas.

The procedures for the study are the following: blood samples are taken from forty to fifty students at the time of their enrollment at the Center and in the third trimester of their pregnancy. The samples are analyzed for eleven nutrients, proteins, and several other elements. The students are interviewed to obtain a dietary history and a 24 hour recall of food intake during each trimester of pregnancy. This information is being compared to the same kind of data for the other two populations.

In the spring of 1973 a progress report on the study noted that twenty-three students at the Family Learning Center had taken part. Dietary surveys completed by Dr. Myrtle Brown indicated that the lunch which the students received at the Family Learning Center contributed a substantial proportion of the daily nutrients which students received. The laboratory analysis of the blood samples had revealed that their nutrient content was higher than that of the other populations in the study. These preliminary data point to the fact that the supplemental feeding program available at the Family Learning Center is contributing to the better outcome of pregnancy.

GOALS, EVALUATION DESIGNS, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1:

Student participants will show a dropout rate which is significantly lower than that for pregnant students in the district prior to the beginning of the program.

The evaluation was made using the attendance records. In the program's first year six of the thirty-eight participants dropped out of school. In the program's third year only one of the forty-one participants dropped out. This rate is substantially lower than that when pregnant students received home instruction. In the seven years prior to the beginning of this program an average of twenty-four girls per year dropped out of school due to pregnancy.

Goal #2:

Instruction in family life education and the counseling program will increase the students' knowledge of the information taught in the program.

Evaluation was made through pre and post testing, psychiatric evaluations (on a need basis), home visits by the nurse and social worker, and rap sessions with the community counselor. The students increased their knowledge of the information taught in the family life education program.

Goal #3:

Babies delivered by the students in the program will be significantly healthier than the state norm for babies born to teenage mothers.

The birth weights of babies born to students in the program were recorded. Less than 1% of the approximately one hundred babies born to students at the Center during the program's first three years were of low birth weight. This is well below the state average of 15% during 1972 and the current national average of approximately 20%.

Goal #4: Statewide Dissemination

To inform New Jersey citizens about the program and its evaluation. In 1973-74 to train interested persons in the replication or adaptation of the program. Evaluation will be made through consultation and responses by consumers to questionnaires on the use and the impact of the training.

COSTS

The bulk of the Title III development grant for the Family Learning Center was for staff salaries.

The primary cost for the Center's continuing operation is staff salaries. The cost of the food for the breakfast program is reimbursable under the state's school breakfast program. The cost of the food for the lunch program is reimbursable under the National School Lunch Program.

Since pregnant students are classified in New Jersey through the Beadleston legislation as chronically ill, costs for the program are 50% reimbursable from the state. As a result the per pupil maintenance cost of the Family Learning Center has been no higher than that of the home instruction which was formerly provided to pregnant students in the district.

Districts interested in adapting the program must allow for the costs of staff training and provide the physical facilities required.

STATEWIDE DISSEMINATION PROGRAM

The project has been funded for 1973-74 by Title III to inform New Jersey citizens about the program and its evaluation. Visitors are welcome to the Family Learning Center. A brochure describing the program is available. A filmstrip which gives an overview of the Family Learning Center's program may be borrowed. A technical manual which describes the program in detail is available at cost.

During the academic year the project staff will offer two one-day orientation workshops on the Center's operation. In June 1974 the staff will conduct a one week training workshop for persons who are interested in replicating or adapting the program. The training will take place at the Family Learning Center. There is no charge for the services of the Center's staff. Persons attending the training workshop are responsible for the costs of installing the program elsewhere. To be eligible for the training, persons must show evidence

of intent to use the information and willingness to respond to questionnaires on the use and impact of the training.

Inquiries about the Family Learning Center and its dissemination materials and services should be made in writing to Mrs. Anna Kelly, Director of Pupil Personnel Services.

CONTACT PERSON

Mrs. Anna Kelly, Director
Family Learning Center
Director of Pupil Personnel Services
New Brunswick Public Schools
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New Brunswick, New Jersey 08902
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Individualized Language Arts: Diagnosis, Prescription, and Evaluation

Weehawken, New Jersey

OVERVIEW

Authorities in the language arts agree that educators need to develop more effective methods of analyzing students' writing, and to prescribe and apply individualized instructional techniques to teach greater writing facility. This project was designed to meet this critical need and has completed three years of development.

The project's rationale is that linguistics, the study of language, provides knowledge which can be translated into techniques for improving selected aspects of writing instruction. These techniques can be blended with a language-experience approach, so that the language, feelings, and ideas of students can be used to promote motivation, precision, and control. Furthermore, such instruction uses writing activities in all parts of the curriculum and can be organized within a diagnostic-teaching framework. Teachers and students can thus have continuous diagnosis of the writing, prescription or relevant methodology, and evaluation of results.

The project staff has devised a method for teachers to analyze students' writing, and guidelines, procedures, strategies, and specific examples of how to teach writing. The teaching methodology also includes ways for teachers to develop and reinforce other language arts skills. The approach is basically one of discovery. It can be used with either graded or non-graded classes. It can be employed with almost any kind of classroom organization.

Students' writing development is traced by three samples, taken at three intervals during the year. The evaluation of the samples is based on criteria suggested by language arts experimentation and the Weehawken teachers. The evaluation pinpoints each student's current strengths and needs. Writing instruction is related to speaking, listening, and reading activities, as well as to the student's ideas and feelings.

The program is used in grades 1 to 12 throughout the Weehawken public schools. The student population is highly mobile and includes many students for whom English is a second language. The program's methods and materials were developed cooperatively by the project staff, Weehawken administrators, and faculty members, and the students themselves. In Weehawken the program has completely replaced writing workbooks and textbooks. As a result it may be fully integrated into any curriculum. The program is fully explained and illustrated with examples in a teachers' manual. No additional reference materials are required.

After two successive years of evaluation, the project staff can now say with assurance that it is feasible, at minimal cost, to train classroom teachers to diagnose students' writing needs and prescribe techniques which can be used every day to meet these needs with results much better than those obtained in school systems which still rely on traditional methods of language arts instruction.

The staff can also assert that these techniques are transferable to other schools including inner city schools where students' language needs are especially critical. For example, after the techniques were adopted by a Newark school with large numbers of Black and non-English speaking students, a dramatic improvement was noticeable very soon in the students' writing skills. For three years in a row, the students have had better evaluations than those of control group classes in the same school. At the same time, these techniques have worked equally well in suburban schools.

Although the project staff has concentrated on improving students' writing abilities, it appears to have helped students in other language arts areas as well. Reading compositions aloud regularly and discussing them has made the Weehawken students proficient speakers and listeners in the classroom, not only in language arts, but in social studies, science, and other subjects as well. Then, too, it has always seemed to the project staff that a writing program which could produce gains in students' vocabulary output, sentence-sense, and organization would also have an impact on reading ability. We are now beginning to see evidence from the standardized pre and post tests in that same Newark school, with experimental classes again being compared to the control group classes, that the program can make a valuable contribution to all of the language arts, including reading.

GOALS, EVALUATION DESIGN, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified a development goal, selected an evaluation design, and evaluated progress toward the goal. It is anticipated that the same results can be achieved in schools with similar populations.

Goal #1

Students will learn to write syntactically more sophisticated and longer sentences as a result of the Weehawken system of diagnosis, prescription, and evaluation.

The evaluation procedure was based on a statistical evaluation of random samples of papers written eight months apart by Weehawken students in grades 3 and 6. This part of

the evaluation was compared to that of control groups in a nearby district. Further, an evaluation was also made of continuing Weehawken students in grades 4 and 7. The evaluation was made according to eleven criteria selected from research and teachers' diagnoses.

Five criteria were adapted from the work of Dr. Kellog Hunt of Florida State University, a nationally known expert in language arts research, who has shown how the syntax in children's writing changes with maturation. The remaining criteria came from the Weehawken teachers themselves who were using the compositions for their own diagnoses of the student's strengths and needs in writing. These criteria represented what the teachers considered to be the major needs of the Weehawken students as a whole.

The evaluation showed that the Weehawken students learned to write longer, richer, and more varied sentences. A simple or complex sentence, or an independent clause inside a compound sentence, is what Dr. Hunt calls a "T-unit." He has discovered that the average number of words per T-unit is the most significant score in correlating students' writing ability with grade level. On this vital score the sixth graders registered a gain of over 45% in a single year, which put them well ahead of both the control group students and the youngsters whom Dr. Hunt, himself, had studied. The Weehawken students were also writing longer dependent clauses. They were using more series of words and word groups to convey greater amounts of information. They were moving parts of their sentences around to a larger extent to vary their writing style and give better emphasis to the most important words and phrases.

Above all, the students tended to write a higher proportion of complex and compound sentences and fewer simple sentences. The ability to combine simple sentences into complex and compound sentences is one of the surest signs of growth in writing. This ability showed itself even at the third grade level. And, in most cases, it was accompanied by a better grasp of punctuation and of correct spelling.

Actually the evaluation disclosed that the Weehawken students had progressed in three ways: They had gained longitudinally with respect to most of the criteria. They had also shown considerably greater improvement than the control group students taught by traditional methods. And, finally, they had scored far better on the relevant criteria

than the students in Dr. Hunt's research population. This last point is especially impressive, for the young writers whom Hunt studied were middle class children for whom English was the first language. The Weehawken students, on the other hand, include a large number of students for whom English is a second language.

The follow-up study in the program's second year indicated that these same students have generally continued to show improvement in their writing.

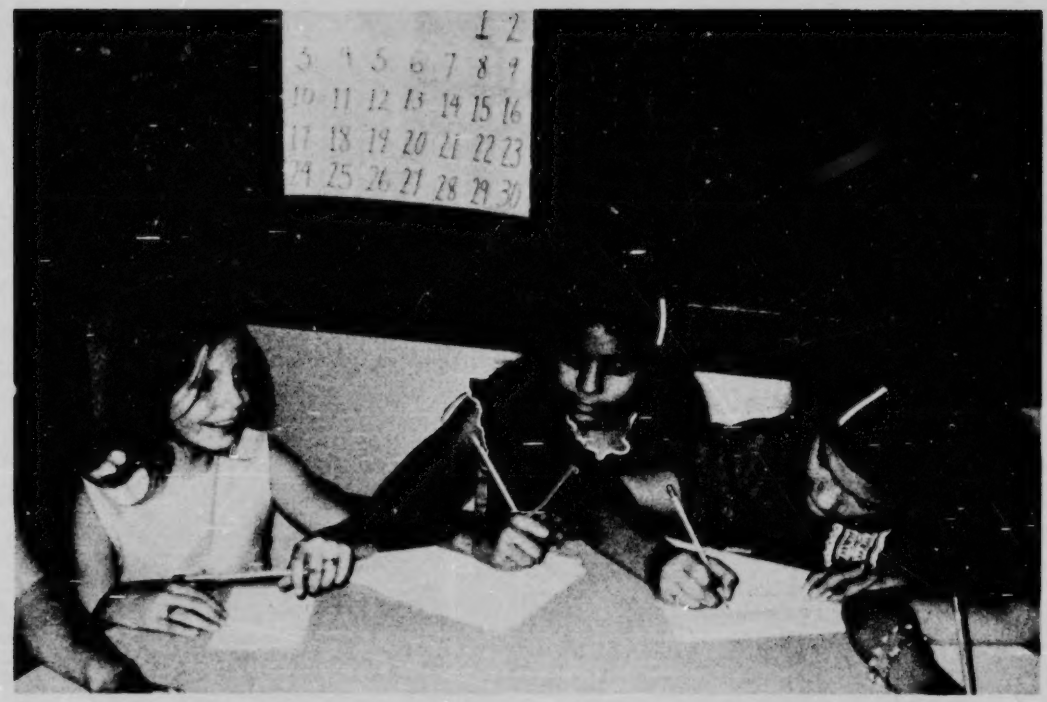
The compositions themselves also showed growth in important aspects of writing which cannot be measured. The students' vocabulary, for instance, was rich and varied, and impressive for its maturity even in the lower elementary grades. It was also well organized. The stories revealed a clear sense of purpose and sequence.

Goal #2: Statewide Dissemination

To inform New Jersey citizens about the project and its evaluation. In 1972-73 to train the staff of one other school district in the program's replication. In 1973-74 to train the staffs of fifteen other school districts to replicate the program.

Evaluation will be through consultation and the responses to questionnaires on the use and impact of the training.

In 1972-73 the program was successfully introduced into one other school district. Additional teachers in the consumer district are now being trained by the project staff.



COSTS

The bulk of the Title III development grant for this project covered the stipends for the project staff. Consultant help was provided by Professors Ted Lane and Edwin Ezor of Jersey City State College, and the following members of the district staff: the Elementary Education Supervisor, the head of the high school English department, and principals.

The cost of replicating the program is basically that of staff training and follow-up supervision. Provision must be made for continuing help, encouragement, and support of staff. Costs would be stipends for teachers to be trained and for consultants. The manual written by the project staff is available at cost. Materials to introduce the program (file folders, duplicating papers, etc.) can probably be absorbed within present budgets. Savings may be realized if the district staff decides to discontinue using special workshops or textbooks to teach writing as is the case in the Weehawken system.

STATEWIDE DISSEMINATION PLAN

The project staff has been funded for 1973-74 to inform New Jersey citizens about the program and its evaluation and to offer training in the replication of the program. General information about the project can be found in "Individualized Language Arts: A Prospectus" which is available free of charge. The teachers' manual is available at cost.

During 1973-74 the project staff will train the staffs of fifteen New Jersey districts. Training began with workshops in the summer, 1973, and will continue with follow-up consultation throughout the academic year. There is no charge for the services of the project staff.

A new group of educators will begin the training in the summer of 1974. Persons interested in this program should inform the project director. They, in turn, will be invited to orientation sessions during 1973-74 and will then be given a detailed explanation of the program and prospective training. On this basis they may decide whether they are interested in the training which is projected to be one week long. The training will probably be held at one of the Educational Improvement Centers. To be eligible for training, educators must show evidence of intent to use the information and willingness to respond to evaluation questionnaires on the use of the training and its impact in a consumer school or district.

Inquiries about the project should be made in writing to the project director.

CONTACT PERSONS

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Consultation is available for the development and dissemination of educational programs through the Office of Program Development, New Jersey Department of Education.

Interning for Learning

Cape May County, New Jersey

OVERVIEW

Interning for Learning was developed through the County Superintendent's office to meet needs shared by the school districts of Cape May County. The program combines the task of individualizing instruction in the elementary grades with a structure to permit teachers to train one another. Overall program direction is carried out by a planning and advisory committee made up of teaching and administrative staff from participating districts and project staff. The committee has an advisory role in the project's development and works to gain the participation and support of all districts in the county. Two of the principal project staff members are the County Helping Teachers.

A self-study conducted in 1969-70 by a district typical of the county indicated that 15% of the students experienced more failure than success in school, 30% found nothing worth the effort, 30% were often in trouble with teachers, and 20% had problems with their peers. A voluntary group of county administrators surveyed six other districts to see if students' individual needs were being met. The results of the self-study and survey revealed a common

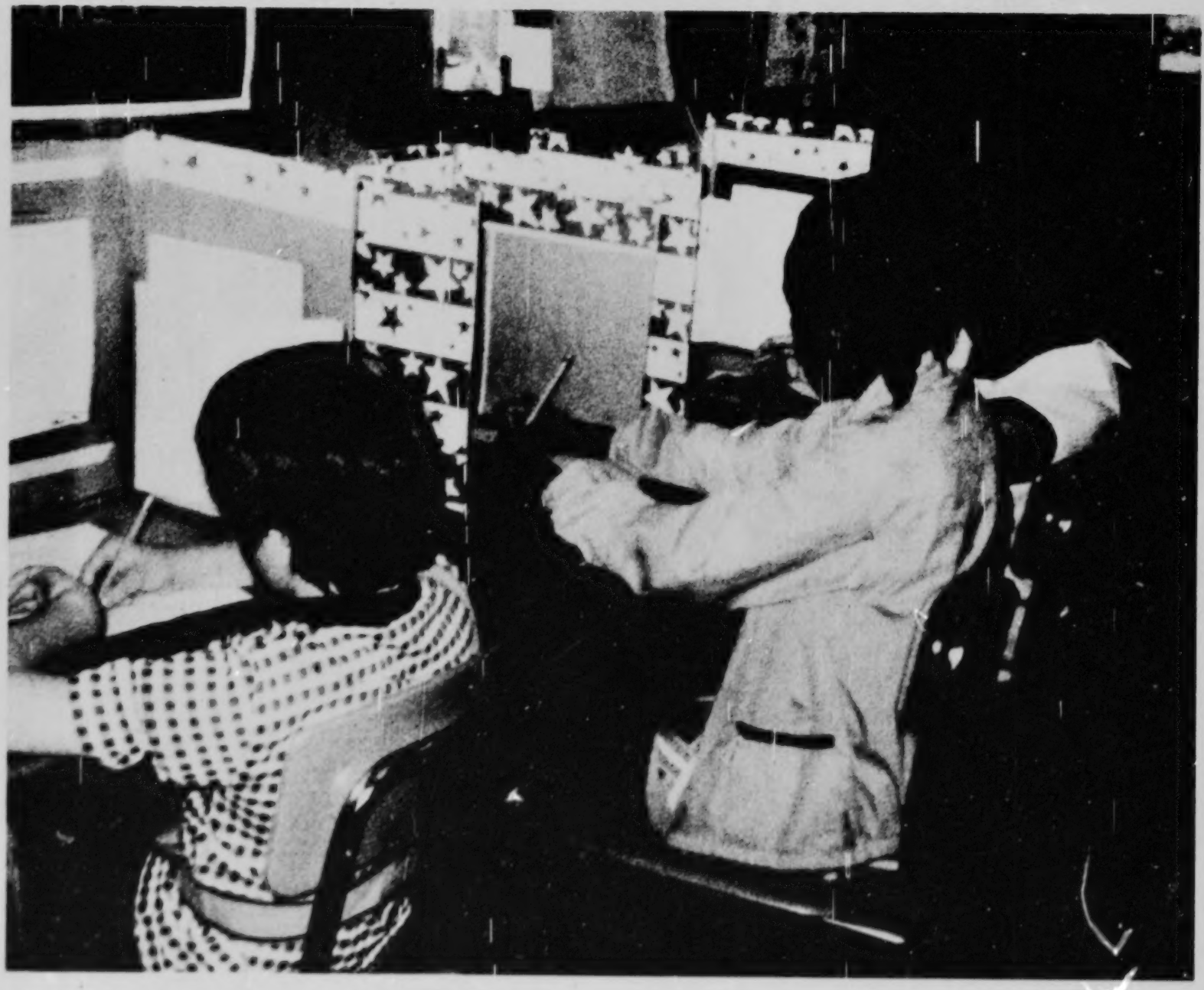
need among districts in the county for continuous staff development in individualizing instruction. The project grew out of this need. The voluntary group of county administrators became the project's planning and advisory committee.

Intern teachers learn a program of classroom management which guides them in grouping students according to academic needs and in organizing classroom activities to provide small group and individualized instruction. This management procedure may be adapted to any curriculum and is most frequently used in a self-contained classroom. Teachers group students by academic needs in three or four groups. Correspondingly, study of basic skills is divided into four types of activities: direct teaching, follow-up activities, learning stations or centers, and independent activities of which there is often a choice. Each student group takes part daily in each type of activity. As the teacher instructs one group at a time in the "direct teaching" activity, the three other groups rotate among the remaining activities. This format requires a two hour block of time. The remainder of the day may be used for small or large group instruction.

Teachers learn to diagnose student needs, evaluate student progress, and design and construct learning stations and centers as the primary modes of individualizing instruction. They also study new teaching materials and methods, including the use of several kinds of media. To provide the optimum atmosphere for this kind of instruction, teachers devise new classroom arrangements to accommodate four simultaneous learning activities.

A visitor to one of the Interning for Learning classrooms will find a warm, relaxed environment and a business-like atmosphere of learning. The rooms are a hum of activity: children are working in all parts of the room, a small group with the teacher, another group looking at a filmstrip, a third group listening to a tape. Some children will be working alone; others in pairs. There is soft talking and movement. Children know what they are doing and why they are doing it. There is no pressure. Children are working to learn and not to compete for grades.

The chief training vehicle is an internship program. This began with the training of two teachers who, in turn, trained twenty others. The twenty have also become trainers of fellow teachers. Interns attend a summer-inservice program



with follow-up workshops during the school year. They intern for one week in the classroom of a teacher who is already in the program. After the trainees have mastered the new procedures and gained experience in using them, they provide internship opportunities for other teachers in their classrooms. Through this turnkey structure sixty-six teachers in fourteen districts and five nonpublic schools have been trained in two years. In addition, more than 35% of the teachers who have not formally participated in the program have put components of the program into practice in their classrooms.

The project headquarters is a resource center where all teachers may go to see sample learning stations and centers, for consultation in individualizing instruction, and to work on materials for their own classrooms.

GOALS, EVALUATION, DESIGNS, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1

The internship program will provide the following results each year:

a. 100% of the participants will individualize their instructional program.

b. Teachers will use at least twenty experimental techniques and new approaches to teaching.

c. Spin-off effect: 25% of the teachers who do not formally participate will adopt components of the program.

Project staff evaluate this goal through classroom observations, follow-up conferences and training, logs of students' daily activities and methods of teaching which are maintained by the teachers. To measure spin-off effect,

principals were asked to identify teachers who had adopted or adapted the program. Forty of the forty-four teachers formally trained in the program in 1972-73 have individualized their instructional programs. Four of the group resigned from the program early in the year for various reasons.

Thirty-seven percent of the nonparticipating teachers teachers have adopted components of the program during the two years in which the program has been in operation.

Goal #2

There will be a 50% increase in the number of children realizing personal success and increased interest in school.

This goal is being evaluated through the comments of teachers, principals, and students; an examination of final grades, promotions, and retentions; and principals' records of discipline referrals. In addition, a comparison will be made of experimental and control groups' performance on the Iowa Test of Basic Skills.

Children in the project classrooms have without solicitation verbally expressed pleasure at being in school, at their new classroom arrangements and schedules, learning stations and centers, and the use of equipment. Teachers have reported satisfaction with their own increased effectiveness and the students' better performance. Principals have noted a sharp decrease in discipline referrals. The classroom atmosphere is happy, relaxed, and humane, providing a climate for better learning.

Because of the varying times at which participating teachers have started the program, a measure of the program's impact on student achievement has not been completed. This will take place in 1973-74 through the use of the Iowa Test of Basic Skills.

Goal #3

School administrative staffs will adopt the goals and objectives of the project and assume the responsibility and cost of teacher internship on the basis of one teacher per year.

At the December 1972 Roundtable Meeting of the Cape May County Administrators, the project's Planning and Advisory Committee requested that all districts budget for intern teachers to match those funded by Title III. Administrators verbally agreed to do so. In 1973-74 there will be forty-four new interns. The expenses of twenty-two of them will be borne by their respective districts.

Goal #4: Statewide Dissemination

To inform New Jersey citizens about the project and its evaluation. In 1972-73 to train staffs of ten schools or districts outside of Cape May County in the program. In 1973-74 to train staffs of another ten schools or districts outside of Cape May County.

In 1973-74 satellite centers for the project will be set up in five counties under the direction of the New Jersey County Helping Teachers. Staff at each center will provide training in the program for a minimum of ten teachers each. Satellite centers will be in Atlantic, Cumberland, Ocean, and Salem counties. The site of the fifth is not yet determined.

Evaluation will be through consultation and the responses to questionnaires on the use and impact of the training.

In 1972-73, thirty out-of-county teachers and two principals were trained. They represented six counties, nine districts, and eighteen schools. Evaluation of the use of the training will be made in 1973-74.

COSTS

The bulk of the project's Title III development grant covers salaries of project staff, stipends for the teachers in the summer inservice program, and substitutes for interning teachers. Two of the principal project staff members are County Helping Teachers whose salaries are not paid by Title III.

The cost of adopting or adapting the program is primarily that of staff training, follow-up supervision, and evaluation. Provision should be made for the continuing support and encouragement of staff.

STATEWIDE DISSEMINATION PLAN

The project has been funded by Title III for 1973-74 to offer dissemination services and materials to New Jersey citizens. Visitors to the project are welcome. General information is available free of charge. Replication materials may be purchased at cost.

The project staff will offer one week of internship training and followup consultation to the staffs of ten out-of-county districts. Training covers classroom management, role of the planning committee, and structure of the internship program. Training takes place in Cape May County.

There is no charge for the services of the project staff. Consumer districts are responsible for costs incurred by their staffs for training and the installation of the program. To be eligible for training, a district must show evidence of intent to use the information and willingness to answer questionnaires about the use and impact of the training.

Inquiries about the project and its dissemination plan should be made to the project coordinator. Information about training offered through the satellite centers is available from the County Helping Teachers in the cooperating counties: Atlantic, Cumberland, Ocean, and Salem.

CONTACT PERSONS

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Project Coordinator
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Harry Brown
Project Director
Administrative Principal
Dennis Township Public Schools
Dennisville
New Jersey 08214

Only through the widespread adoption or adaptation of successful ESEA, Title III programs can the full return on the development dollar be realized.

LEARNING CENTER

Integrated Alternative to Special Education

Winslow, New Jersey

OVERVIEW

The overall goal of this project is to eliminate the isolation of students who are classified as educable mentally retarded, perceptually impaired, and neurologically impaired. Students so classified are offered an educational program that includes activities in the regular classroom as well as in a learning center. On the average the students spend half of their school day at each site. Their educational program is individualized to meet their specific needs. The project has completed its second year of development.

Several research reports indicate that the self-contained special education classroom in the elementary school is inadequate to meet the educational and social needs of special education students. There are two main reasons for this. The first is that the students are isolated from their natural peer group and thus do not have an opportunity to learn from them. The second is that the isolation itself damages the students' self-concept and thus impairs both cognitive and affective development. This project was designed to replace the isolated special education classrooms within the Winslow Township public schools. After two years of operation, there are two elementary schools which have learning centers. They serve fifty-eight students.

The learning centers are equipped with a wide variety of programmed, individualized, and multi-media instructional materials. The learning center teachers are assisted by volunteer parents, college students, and retired citizens. Working together, these persons provide a generous amount of individualized attention to the students.

GOALS, EVALUATION DESIGNS, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1

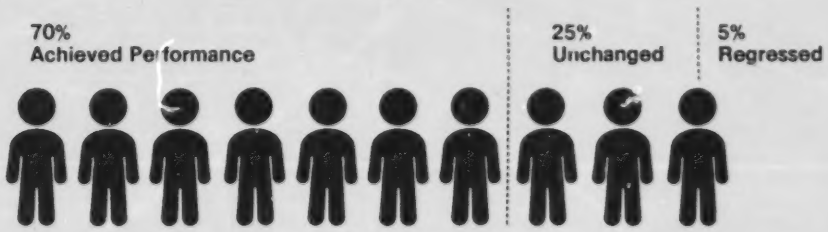
Seventy percent of the students classified as educable mentally retarded, neurologically impaired and perceptually impaired will demonstrate academic performance within six months of the standard of expectancy associated with their mental age as measured by standardized achievement tests.

The students' progress is measured by the Peabody Achievement Test which is administered on a pre and post basis in September and April.

Seventy percent of the students have closed the gap between performance and expected performance. The gap remains unchanged for 25% of the students and has widened for 5% of the students. The elementary school principals report that the regular classroom teachers have demonstrated the skills necessary to instruct special education students in their classrooms.

Academic Performance Meeting Standard of Expectancy Associated with Mental Age

Educable Mentally Retarded, Neurologically Impaired, or Perceptually Impaired



Based on an 8-month period as measured by the Peabody Achievement Test

Goal #2

Participating students will demonstrate greater positive social relationships with the regular students as measured by survey forms, teacher observation, discipline referral forms, and staff-developed sociogram.

Interviews conducted by the project staff with parents, teachers, and students indicate that the students have developed social competence.

A classroom sociogram by the project staff is being administered district wide to every classroom. The project staff considers this instrument a measure of the social behaviors of special education students, for it indicates the degree of their acceptance by all students. Preliminary results indicate that more than 50% of the special education students can be considered part of the mainstream of education. In other words, they are no longer socially isolated from the regular students.

Goal #3: Statewide Dissemination

The project staff will inform New Jersey citizens about the program and its evaluation. Training in the replication of the program will be offered by the project staff to the staffs of six other school districts in 1973-74.

Evaluation will be based on responses to questionnaires on the use and impact of the training.

COSTS

The bulk of the Title III development grant to Winslow covers staff salaries including stipends for teachers to develop curriculum during the summer.

The project staff estimates that the operation of a learning center requires a reallocation of a district's expenditures but will not increase its operating costs.

Educators estimating the cost of replicating the program will have to plan for the costs of training staff. This may include consultant fees. Introduction of the program should include provisions for follow-up consultation and supervision of staff.

STATEWIDE DISSEMINATION PLAN

The project staff has been funded for 1973-74 to inform New Jersey citizens about the program, its evaluation and dissemination plan. The first and third Thursdays of each month are set aside for visitors to the project. The project staff will offer training in the replication of the program to the staffs of six districts. The training will take place in Winslow Township. There is no charge for the services of the staff. Districts whose staffs are being trained are responsible for the costs incurred by their staffs for training and adaptation of the program. To be eligible for the training, a district staff must give evidence of intent to use the information and willingness to respond to questionnaires on the use and impact of the training.

General information about the program is available free of charge. Replication material is available at cost.

Inquiries about the program and its dissemination materials and services should be made in writing to the project director.

CONTACT PERSON

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LEM: Learning Experience Module

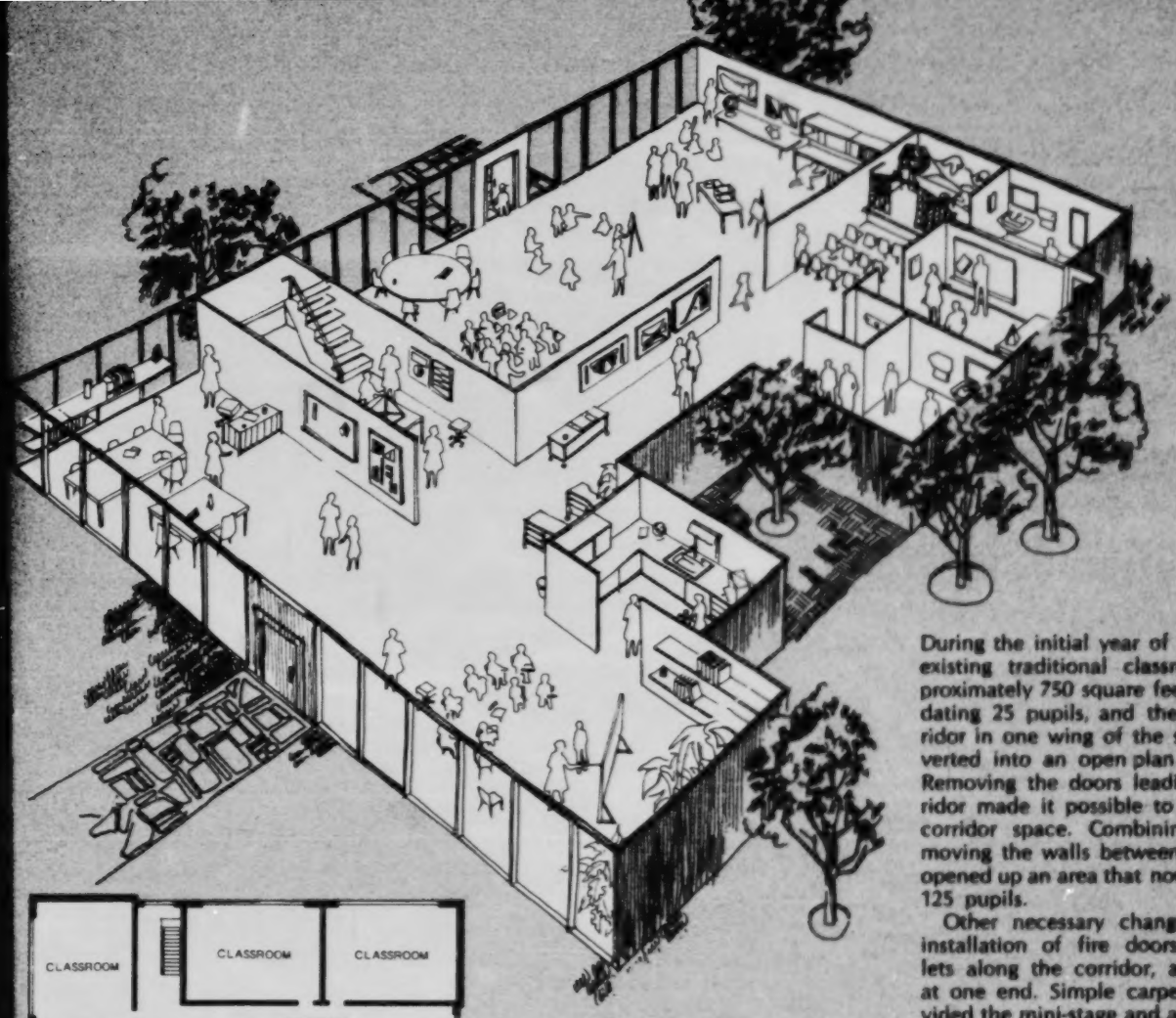
Hackensack, New Jersey

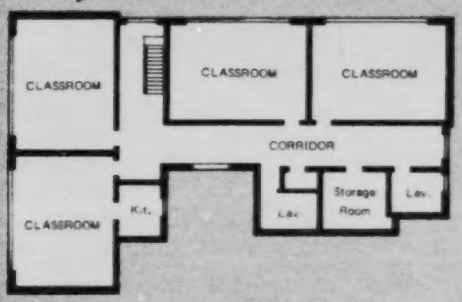
OVERVIEW

Project LEM was designed to eliminate overcrowding in an old school, raise students' reading and mathematics achievement scores, and improve students' attitudes about themselves. These needs stemmed from the Hackensack school district's commitment to provide an educational program and learning environment that will enable each child to achieve self realization and social competence.

Hackensack is an urban center whose population is 5% non-English speaking, 37% Black, and 58% White. The students in Hillers Elementary School, the project site, are a cross-section of the community. Those who took part in the project were randomly selected with the exception that all non-English speaking students were included.

The project staff developed plans to renovate portions of the school to accommodate more students, and an educational program for the open space which renovation provided. The educational program includes techniques to group students to foster their intellectual and social growth, a team organization for teachers, and a mode of scheduling that permits teachers to give more individualized instruction and specialize in some subjects. During three development years,





LEM I

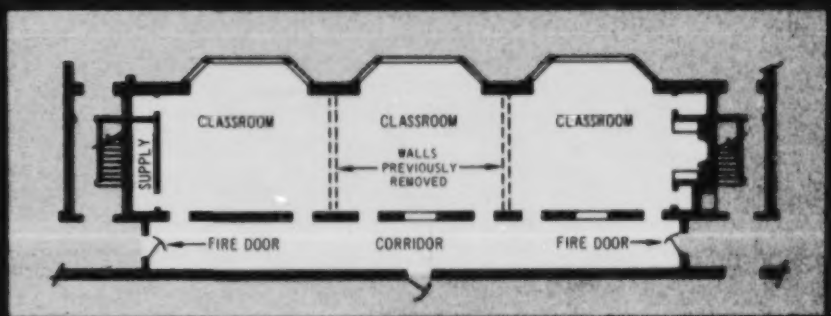
During the initial year of the project, four existing traditional classrooms, each approximately 750 square feet and accommodating 25 pupils, and the connecting corridor in one wing of the school were converted into an open plan learning center. Removing the doors leading into the corridor made it possible to fully utilize the corridor space. Combining this with removing the walls between the classrooms, opened up an area that now accommodates 125 pupils.

Other necessary changes included the installation of fire doors, electrical outlets along the corridor, and a stage area at one end. Simple carpentry chores provided the mini-stage and any needed shelving. A storeroom became a staff office-workroom. Carpeting throughout the classrooms and the corridor enhanced the open plan design, while applying fresh paint, in bright colors, completed the modifications.

LEM II

The establishment of this learning center was accomplished by combining a corridor with an already existing open classroom area adjacent to it. The space previously accommodated 75 youngsters. After the change, it was able to meet the needs of [illegible] youngsters.

No walls had to be removed, but a [illegible] had to be built at each end of the corridor. An acoustical ceiling and new wall lighting were installed in the corridor section. Doors leading from the large room into the corridor were removed, electrical outlets were installed, and the floor was carpeted. A [illegible] was planned and completed with an existing fireplace as its center. A kitchen staff workroom was created through the conversion of a storage closet off the corridor.



the staff organized three LEM's or open plan centers to accommodate a total of 350 students.

The first LEM was developed in space that was originally four separate classrooms and the adjoining corridor. Two classroom walls were removed to provide two large open areas. Floors were carpeted, acoustical ceilings installed, walls painted, and a small stage built at one end of the corridor. The removal of walls, some doors, cloakrooms, and the use of the corridor as instructional space increased the amount of usable space to the extent that 125 instead of 100 students could be accommodated.

The remodeling for each LEM was slightly different. But, in each case, the goal was the same: to create more useable space for many modes of instruction. Although each LEM has the standard teacher-pupil ratio, the scheduling and grouping techniques permit variation in instruction. For a group of 100 LEM students, there is a staff of six: team leader, four teachers and one aide. The LEM's of 125 students have a fifth teacher. Each LEM spans two grade levels: 2nd and 3rd; or 4th and 5th. Each teacher instructs one group of students daily in each of the basic skills: reading, language arts, and mathematics. In addition, each teacher prepares and teaches lessons for several groups of students in one of the following areas: social studies, science, or cultural arts. For these subjects students rotate, studying a different subject each day. This schedule permits teachers to work closely with a small number of students over a two-year period in basic skills and, also, provides teachers the time to develop and teach one other subject in depth.

Students with similar needs are grouped for reading, language arts, and mathematics. Students change to heterogeneous groups for social studies, science, cultural arts, music, physical education and art. The groups are changed as the students' social and intellectual needs change. To this basic structure, the instructional team often adds large group and individualized instruction to provide variety and answer special needs. This grouping fosters the students' continual growth in basic skills, as well as their social development.

The project director describes the project in action:

> "I like the feeling one gets upon walking into the LEM. Somehow it exudes a warmth...a concern ...a sense of children profitably engaged in a variety of activities. It's bubbling. It hums. There's interest and love, and, above all, a belief in the kids."

The LEM educational program may be used with any curriculum. The teacher organization and student grouping procedures may also be used without an open space center.

GOALS, EVALUATION DESIGN, AND RESULTS

In accordance with ESEA, Title III requirements, the Project LEM staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Student Goal #1:

An increased knowledge of vocabulary, reading comprehension and mathematics skills as measured by the California Achievement Test, 1970 edition, so that (a) the mean percentile ranking of those children functioning below the 40th percentile would increase by at least 50% during the school year; (b) those functioning at or above the 40th percentile would maintain or improve their percentile ranking.

Pre-test scores are based on testing in 1971-72; post-test scores are based on testing in 1972-73.

Scores of 2nd through 5th Graders
Initially Ranking Below the 40th Percentile

	Mean Pre-test Percentile	Mean Percentile for Objective	Mean Post-test Percentile
Vocabulary	22	33	41
Comprehension	14	21	44
Mathematics	15	23	37

Scores of 2nd through 5th Graders
Initially Ranking at or above the 40th Percentile

	Mean Pre-test Percentile	Mean Percentile for Objective	Mean Post-test Percentile
Vocabulary	68	68	73
Comprehension	66	66	70
Mathematics	66	66	78

Student Goal #2

An increased positive attitude toward self, peers, and school, as indicated by improving scores on the locally-designed LEM Student Attitude Inventory by at least 5% compared to pre-test scores.

Comparison of pre and post test scores showed that right answer responses had not increased by 5% but remained virtually the same.

Teacher Goal

To demonstrably increase the ability of 17 project staff members to diagnose the needs of children and in providing a continuum of appropriate learning experiences through participation in pre-service and in-service programs.

Pre and post questionnaires administered during summer planning periods have shown staff development. The change is also evident in the way teachers work with each other and with students.

Parent Goals

To demonstrate knowledge of the project's purposes by correctly answering an average of 16 out of 20 questions on a locally designed LEM Facts Inventory. To display a positive attitude toward their child's participation in the LEM as evidenced by attaining a mean Desired Response Factor of at least .70 on the locally designed LEM Parent Attitude Inventory. To gain knowledge and ability for assisting their children in improving skills in reading and math through a series of workshops conducted by team leaders, as evaluated by report of the workshop activities.

The first two parent goals were met. Not as many parents attended the workshops planned for meeting the third goal as the staff had hoped.

Facilities Goal

To accommodate approximately 25% more students without any sacrifice to the educational program by converting existing traditional classrooms into the physical environment of an open plan school design. This goal was met through the renovation.

Statewide Dissemination Goals

To inform the New Jersey citizens about the project and its evaluation. In 1972-73, to train staffs of five schools or districts in the adoption or adaptation of LEM. In 1973-74, to train the staffs of eight other districts.

Evaluation will be made through consultation and responses by consumers to questionnaires on the use and impact of the training.

In the summer, 1973, staffs of five New Jersey school districts were trained in the LEM educational program. Evaluation of this training and its use will take place in 1973-74.

COSTS

LEM's basic costs were renovation and staff salaries. The bulk of the Title III development grant was used for the latter. Costs of replicating the project will be primarily those of renovation and staff training. After the initial investment, maintenance costs should not exceed those of current programs. Savings may be realized by accommodating additional students in renovated facilities.

LEM I may be used to illustrate renovation costs. Remodeling including removal of walls, painting, building of a small stage, installation of acoustical ceiling, carpeting, curtains, electrical fixtures, blackboards and shelving cost approximately $8,000.

Statewide Dissemination Plan

Project LEM has been funded by Title III for 1973-74 to offer dissemination services and materials to New Jersey citizens. One day per week is set aside for visitors to the Hillers Elementary School. Four booklets describing the program are available free of charge; two filmstrips may be borrowed. Members of the LEM staff are available to visit interested districts or schools to explain the program.

In the summer, 1974, the LEM staff will offer to the staffs of eight schools or districts a one week training program in the replication of the program and follow-up consultation during the ensuing year. Each district staff will be trained by itself with special reference given to its needs and goals. The training will take place in Hackensack. There is no charge for the services of the LEM staff. Schools or districts being trained are responsible for costs incurred by their staffs for training and installation of the program. To be eligible for training, a district must show evidence of intent to use the information and willing-

ness to answer evaluation questionnaires. Inquiries about Project LEM should be made in writing to the project director.

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Project MOPPET:
Media Oriented Program Promoting Exploration in Teaching

Woodbridge, New Jersey

OVERVIEW

The MOPPET staff has designed a humanities curriculum for the non-specialist. Using the MOPPET lessons, regular classroom teachers may introduce a comprehensive humanities program of poetry, creative drama, music, art, dance or movement, and film making into the elementary school curriculum. Lessons may be taught as separate entities, or integrated into the academic curriculum, or both. The lessons were developed by artists on the MOPPET staff, piloted in experimental classes, and have now become part of the elementary school curriculum in Woodbridge.

The district's educational needs which led to this program were (1) to provide modes of expression and success experiences for students who were low achievers and often non-verbal in orientation and (2) to permit all students to express themselves in the arts. At the program's outset, the MOPPET staff hypothesized that if these needs were met, students' language arts skills, including reading, would be improved. Progress toward the fulfillment of these needs is described in the goals section of this article. The program has completed its third year under Title III funding.

The objectives of each MOPPET lesson are clearly stated along with the required materials and recommended procedures. While the lessons themselves form a core humanities curriculum, teachers are encouraged to view them as a pathway or guide for lessons which they will write for the arts or other curriculum areas.

Lessons begin with the setting of a mood or creation of a new environment. To do this, teachers use movies, slides, overhead transparencies, music, poetry reading, story telling or the movement of students around the room. Students talk about what they have seen or done and the way the experience makes them feel. Next students carry out a project, individually or in groups, in which they express their feelings and thoughts about the subject at hand. Students may write poetry, illustrate it, and read it aloud. They may write plays and perform them. In some lessons, they design sets, write screenplays and produce films. In others, the students express emotion and thought through movement. Whatever the medium, the hallmark of the lessons is that the students are the artists. They create works of art once they have learned the techniques and are given the freedom to express themselves.

When a MOPPET lesson is in progress, there is an identifiable kind of communication between teacher and students. Teachers are accepting of students' ideas and feelings; teachers spend much of their time listening to students and encouraging them to express themselves in the art form at hand. Students, in turn, feel free to experiment, explore, talk with one another to question, clarify, and work. Students feel independent in and responsible for their work. The teacher is a consultant; the students are artists.

In addition to writing the lessons, the MOPPET staff has created a physical setting which they feel is optimal for teaching the humanities. The "MOPPET" room is slightly larger than a regular classroom, carpeted, empty of furniture, and, at one end, has a curved screen large enough for three simultaneous projections. Within this framework, the staff uses several types of equipment, including projectors, tape recorders, record players, cameras and rhythm instruments.

A similar setting may be created in a classroom, all-purpose room, library or another large room available in most schools. Furniture may be pushed aside. Instead of a large curved screen, one may use three individual screens, a large sheet of white paper taped to the wall, or an uncluttered wall surface.

As teachers become familiar with the MOPPET lessons, they will want to begin to design their own and experiment with various media and combinations of media. And the materials for the lessons themselves can be largely student

and/or teacher-made. Teachers' development of judgment, taste, and style in these matters will open up new curriculum possibilities.

The resource materials required for the MOPPET lessons are available to Woodbridge teachers in kits keyed to each lesson which can be borrowed from the Central Instructional Materials Center. The cooperative efforts of the MOPPET staff and the Supervisor of Libraries and Media have put the lessons within easy reach of all teachers.

GOALS, EVALUATION DESIGNS AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1

Students will demonstrate skills and creativity in the arts.

Goal #2

Students in grades K-2 who are in the bottom 25% of their classes in language arts will improve the average level of their language arts skills.

Goal #3

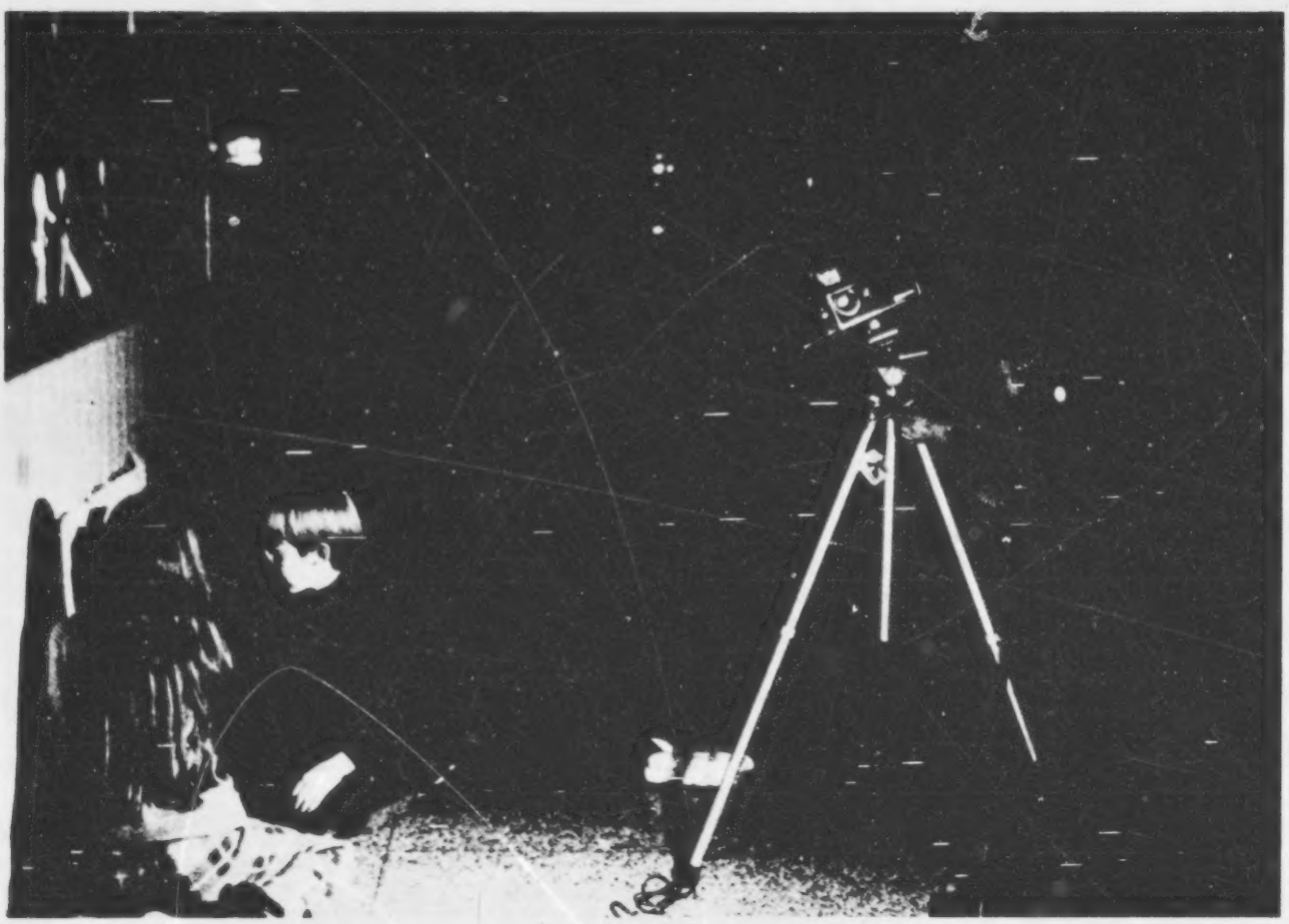
Students' reading abilities will increase significantly.

Goal #4: STATEWIDE DISSEMINATION

New Jersey citizens will be informed about the project and its evaluation. The project materials will be available to all interested parties at cost. In 1972-73, the staff will

train educators from three districts in the program's replication; in 1973-74, they will train educators from 20 to 25 districts.

Experimental classes were a first grade in 1970, first and fourth grade classes in 1971, and a fourth grade in 1972. Appropriate control classes were also set up. Experimental classes were given daily MOPPET lessons for 7 to 9 weeks. Pre and post tests were given whenever possible. The published tests used are: Torrance Tests of Creative Thinking, Boehm Test of Creative Concepts, Thorndike Cognitive Abilities test. Project-designed tests are in art, poetry, creative drama, movement and attitude. School system reading test scores are reviewed for evidence of the program's influence on reading and language arts.



The 1970-71 first grade experimental class scored significantly higher than the control class on the Torrance Tests of Creative Thinking (Verbal), Boehm Tests of Creative Concepts and a clay sculpture test. The Cognitive Abilities Test (CAT) was used for baseline data. Second grade reading scores of this class are extremely high.

The 1971-72 fourth grade experimental class scored higher than the control class in both the Verbal and Figural sections of the Torrance Tests of Creative Thinking, although not significantly so in most cases. The experimental class scored significantly higher on the attitude test and in the language arts input of the poetry test. All measures to date were in the hypothesized direction, most of them by significant proportions.

The evaluation of the statewide dissemination program is through consultation and the response to questionnaires on the use and impact of training. In 1972-73, two districts began pilot replications of MOPPET. Evaluation will take place in 1973-74.

SAMPLE MOPPET LESSON

POETRY

GRADES - FOURTH AND FIFTH

POETRY - Composing an ocean poem

OBJECTIVES

1. Respond to a beach-like environment.
2. Enjoy creative writing.

EQUIPMENT AND MATERIALS

1. Projection screens or blank wall
2. 16 mm projector
3. 1-2 slide projectors
4. Tape recorder
5. Film, "Seashore Life," Encyclopedia Brittanica Educational Films, 11 minutes, color, or "The Searching Eye," Pyramid Films, 18 minutes, color, 1968.
6. 1-2 trays of slides of seashore or ocean scenes
7. Tape of ocean sounds
8. Box of sand and shells
9. Bottle of sea water (optional)
10. Experience chart paper
11. Magic marker

VOCABULARY

Encourage words about the sea, shore, sea creatures, etc.

MOTIVATION AND PROCEDURE

1. Create a beachlike environment.

    a. Prepare a large flat box with sand and shells. Pour some sea water over the sand to simulate the smell of the sea.
    b. Set up the film projector with "The Searching Eye" in the center of the projection area.

c. Set up two slide projectors on either side of the film, projecting slides of beach scenes.
d. Use a tape recording of the ocean sounds as your sound track.

2. Have class sit in a circle. Pass the box of sand - shells around. Listen and respond to what the children are saying.

   a. Play tape. Ask "What does it sound like?" "What do you hear?"
   b. When someone eventually says "the ocean," use that as a cue to turn on the slides and film. Say, "OK, now, listen and watch."
   c. Randomly flash slides as long as the film lasts.

3. After the children have been exposed to rich aural and visual input, start them writing ocean poems. Write responses on experience chart till you have a complete class poem--then let children write their own poems.

Examples:

If I lived in the ocean...
I'd wear a crab-red
dress and seaweed shoes
I'd ride the seahorse
and play "Pin the Tail
on the Whale."

- Bette Distler

COSTS

The bulk of the MOPPET Title III development grant was for staff salaries. The essential materials for the introduction of the MOPPET humanities curriculum in other districts are the lessons themselves and the replication manual called "MOPPET: HOW TO DO IT." They are available from the project, at cost, which is $13.

The majority of the lessons call for the use of equipment and materials already found in most districts. The essential equipment and an estimate of its cost are:

Projection screens (3)	$ 75
Slide projectors (3)	300
Film projector, 16mm	500
Overhead projectors (3)	225
Cassette tape recorders (3)	75
Record players (3)	225
	$1,400

In the first year of the MOPPET program, the district received no outside funding. The lessons were taught largely with materials already available with an additional expenditure of about $200. This point is made to show that almost any school or district can afford to begin to use the lessons.

Costs and specifications for additional materials and equipment, including plans for building a curved screen, are available in the project's dissemination materials.

The remaining category of costs for interested persons to consider are those of staff training. These costs will depend upon the skills and background of the interested staff. It should be emphasized, however, that the lessons are designed to be used by the regular classroom teacher. Careful study of the lessons and the replication manual should supply the basic information required to begin using the lessons.

STATEWIDE DISSEMINATION PLAN

The MOPPET staff has been funded for 1973-74 to inform New Jersey citizens about the program, its evaluation and dissemination services, and to offer training in its replication. Three days per month are set aside for visitors. There is a special observation room for visitors' use adjacent to the MOPPET room. General information about the program is available free of cost. A filmstrip which gives an overview of the program may be borrowed. MOPPET lessons, K-6, may be purchased as a unit for $10 or by sections of K-3 and 4-6 for $6 each. The cost of "MOPPET: HOW TO DO IT" is $3. The Woodbridge Board of Education holds the copyright for these materials.

In 1973-74, the MOPPET staff will offer a series of ten training workshops in Woodbridge for staff members of twenty-five school districts. Special follow-up consultation will be available to the staffs of ten of these districts which make a commitment to introduce the MOPPET humanities program into the curriculum. There is no charge for the services of the MOPPET staff. To be eligible for training, districts must show evidence of intent to use the training and respond to questionnaires to evaluate its use and impact in the consumer district.

The MOPPET staff includes Gloria Alibani in art, Anne Battle in creative drama, Carol Henry in movement, Norman Edge in music, and Bette Distler in poetry. Rosemarie Mazzeo is the Curriculum Specialist.

Inquiries about the project and its dissemination materials and services should be made in writing to the project director.

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Project Open Classroom

Wayne, New Jersey

OVERVIEW

The Open Classroom is characterized by the openness of administrators, teachers, and students to new ideas and initiatives, and their sensitivity to and support of other people. Teachers and students are freed from the constraints of time prescribed by a lock-step curriculum. Open classroom doors and halls allow students to move freely, yet with responsibility. Open curriculum choice permits students to work in areas of their interest, when and for the time they wish. The open classroom environment stimulates learning by providing structure with choice for both students and teachers.

Project Open Classroom is based on the philosophy that the individuality of students should be recognized and the school program structured to accommodate different interests, personalities, and rates of learning. The project staff also believes that students should become self disciplined and develop a sense of responsibility for their own learning.

Two schools in Wayne are taking part in the program which is in its third development year. The grades included are K through 5th. Teachers work both in teams and in self-contained classrooms. One school, however, is moving towards the vertical grouping of students. This means that students who represent two or three age levels and many development levels will work and learn together.

The program's goals focus on changes in student behavior. But, to put the program into practice, the central step was to work with teachers. In a two week summer workshop, teachers began by studying Piagetian concepts of child development and the philosophy and process of opening classrooms. Subjects of subsequent workshops and consultations included the use of criterion referenced tests as a diagnostic tool...individualizing teacher-made or commercial curricula

using flow charts which are coordinated with task cards and resource materials...organizing learning centers...a new approach to the language arts...use of manipulative materials... evaluation techniques and record keeping methods. Teachers were given skills and concepts lists for mathematics and reading which provide for the complete development of elementary school students in these areas. Using these tools, teachers were shown how to structure curriculum on an individualized basis.

The specific changes in student and teacher behavior which this program produces are listed under the goals.

GOALS, EVALUATION DESIGNS, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

First Year Goals

Goal #1

Children exposed to Open Classroom environment will be working at their own ability level and will compare equally with their previous rate of growth in reading and mathematics.

Evaluation Procedure

In the first year the California Achievement Test was used to compare Open Classroom students with non-project children.

Conclusions

For the most part in the first year no difference was found between Open Classroom children and non-project children, indicating that Open Classroom children were working at their own ability level.

Goal #2

Children of the Open Classroom will be able to behave in a socially acceptable manner in the informal classroom where formal discipline is not imposed by the teacher. This includes a sense of responsibility toward their work, their peers, and adults, and in the maintenance of their school.

Evaluation Procedure

Several measures were used: the flexible use of space scale, grouping measure and student activity measure, comparing Open Classroom teachers to non-project teachers to determine if project classrooms were more open.

Conclusions

Open Classroom teachers made more flexible use of space than non-project teachers. Open Classroom classrooms manifested more experimental activities. There was less listening to

the teacher in a formal sense and more small group activities than in non-project classrooms.

Goal #3

The Open Classroom experience will engender positive attitudes in children toward school and toward themselves.

Evaluation Procedure

Open Classroom and non-project children were compared on school sentiment index and on a self-appraised inventory.

Conclusions

Project Open Classroom children showed a significantly more positive attitude toward self and school.

Goal #4

Open Classroom teachers will be more creative, warm and supportive as a result of their involvement in open classroom.

Evaluation Procedures

The Tuckman Teacher Feedback form was used to compare Project Open Classroom and non-project teachers. The Friedman two-way analysis of variance was used to compare teacher groups.

Conclusions

Project Open Classroom teachers were found to be more creative, warm and accepting than non-project teachers.

Summary of the First Year Goals and Evaluation Process

The evaluation for the first year was summative. That is, the

attainment of project objectives was examined relative to the attainment of these objectives by non-project classes. Thus, evaluation was broad and comprehensive and focused on behavior of both teachers and students. With regard to teacher behavior, aspects subjected to evaluation included the use made of space, grouping practices, diversity of student tasks, teacher-student verbal interaction and classroom climate. Student behavior studied included achievement, school sentiment, self-appraisal, and cognitive task performance. The evaluation design used in the first year evaluation included a control school in addition to the two project schools.

Second Year Goals

Goal #1

Children in the Open Classroom environment will be working on their own ability level in reading and math on an individualized basis.

Goal #2

Children will be motivated to work on their own child-interest centered level in reading, math, language arts, social studies, and art.

Goal #3

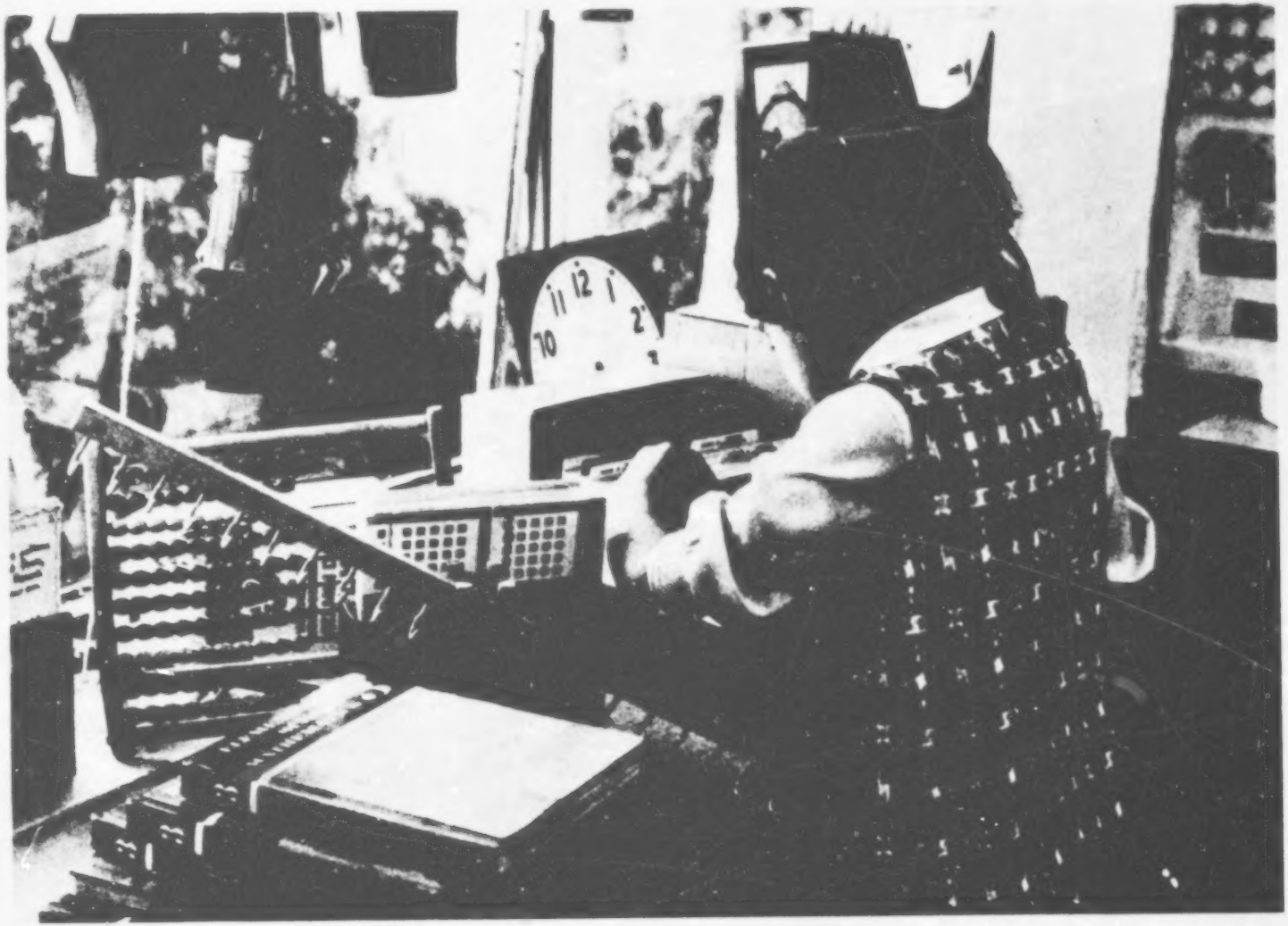
Children will be displaying responsible value-centered behavior.

Goal #4

Given the option, children will involve themselves in interdisciplinary learning experiences which will enable them to manipulate ideas in a cognitive and an affective sense and transfer them in the verbal and non-verbal sense.

Goal #5

Children will be able to maintain gains from goals set from the first year.



Evaluation Procedure for Second Year

The first year evaluation provided a valuable source of empirical support for the Open Classroom approach on which the second year evaluation capitalized. In contrast to the first year, the second year evaluation was formative. It monitored goal attainment within the project on an ongoing basis and fed these data back into the project in order to make possible the refinement of project inputs and processes so they might more closely approximate predesignated goals.

Conclusions

It must be kept in mind that three levels of the project were operating simultaneously. Grades K-3 in one school were in the most advanced position after two years of program experiences. Grades 4-5 in this school began their first year in the project, and grades K-5 in the second school were in an intermediate position because of a different interpretation of the program. For this reason all goals were not expected to be achieved to the same degree in all grade levels at both schools.

Self-discipline, teacher-student interaction patterns which included openness of teacher style, achievement of prespecified criterion behaviors were part of the evaluation which was formative, observational, and collateral (rather than controlled). The evaluation methodology was consistent with the philosophy of the project.

On the basis of the data on the observation scales, it was concluded that the behavior of teachers in Project Open Classroom was quite open and flexible and hence consistent with the goals of the project, particularly 2, 3, and 4. In looking at criterion tests based on a prespecified skills and concept list, student performance was on target and satisfactory in relation to criterion expectations. Substantial mastery gains occurred during the course of the school year, suggesting that the project had not only changed teacher behavior, but continued to produce positive results in student performance on meaningful criteria, consistent with the project's first and fifth goals.

California Achievement Tests

Although California Achievement tests were not to be used as a summative evaluation instrument, they still were given to grades 2-5 in October and May. The California Achievements provided background color while Criterion Referenced Tests filled in more meaningful details in a tapestry of evaluation results.

For the first time in all the years of giving the CAT in Wayne, the learning curve is displaying a consistent upward trend in the open classrooms. Minus scores for lower achievement levels have been eliminated. All children have shown growth rather than the hit-or-miss learning situation that existed previously. There was also notable improvement in language and math scores.

COSTS

The bulk of the project's Title III development grant covers the salaries of project staff, the teacner training program, and the purchase of new educational materials for the classroom. A district interested in adapting or adopting the project will have to provide for staff training. Other costs should be covered by a reallocation of current expenditures. Maintenance costs of the program should not increase current expenditures.

STATEWIDE DISSEMINATION PLAN

Open Classroom has been funded by Title III for 1973-74 to offer dissemination services to New Jersey citizens. Visitors to the project are welcome. Project materials are available free of charge. Members of the project staff are available to visit interested districts to explain the program.

The project staff will offer the staffs of three schools or districts training in the program's replication. The training format is a five day workshop. In addition, there will be an opportunity for teacher-trainees to intern in

Wayne open classrooms for three days. Follow-up consultations will be provided. The workshop will be held in the consumer district. There is no charge for the services of the project staff. To be eligible for training, districts must show evidence of intent to use the information and willingness to respond to evaluation questionnaires.

For further information about the project and its dissemination plan, please contact in writing the project director.

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Applications for ESEA, Title III grants are available from the Office of Program Development, New Jersey Department of Education, after October 15, 1973.

Pollution Control Education Center

Union, New Jersey

OVERVIEW

A total classroom instructional program in pollution control education for elementary, junior high, senior high, and adult education is being produced through the Pollution Control Education Center. The program has been designed to develop students' interest in the wise use and preservation of the biosphere and to give them an understanding of the threat that an industrialized society poses to the balance of the ecosystem.

The project staff has completed its third year of work under a Title III grant to write and produce the program. The materials for grades 1 through 9 are being published commercially for national distribution. Materials for grades 10, 11, and 12 are in preparation. Unit content is varied and includes comprehensive coverage of the topics of solid waste and sewage treatment, and air, water, thermal, marine and seashore, and urban pollution. In other units pupils are actively involved in the critical environmental problems of open lands, wildlife, wetlands preservation, energy conservation, resource management, and community response--all presented in scientifically accurate and socially responsible settings.

In developing the materials, extensive classroom teacher input and field testing has been emphasized to assure maximum effective "teachability" of the materials. A microwave television system has been used to facilitate program modification, field testing, and inservice staff training.

Each multi-media instructional kit engages a class in a variety of pupil centered, hands-on, problem solving activities which involve students in practical decisions on the appropriate responses they can make as citizens in order to

WHAT POLLUTION
ECOL
Environment
Clean
Pollution Control Education Center
Thermal Water Pollution

solve environmental problems. The kits include imaginatively illustrated student booklets which relate new ideas to the students' own experiences. Student investigations provide pupils with the opportunities to have first hand experience with pollution and pollution control processes. These experiences are described on spiritmasters, experiment sheets, and activity cards so that a teacher may readily individualize instruction to meet a class member's specific needs and interests. The material in each kit is desgined to be taught as a one or two week unit.

Audiovisuals enable pupils to observe phenomena which cannot be duplicated in the classroom. Filmstrips and filmloops, overhead transparencies, and audio cassettes are included in each kit to aid class discussions of important ideas.

A comprehensive teachers' guide enables a teacher to handle the program without specialized training. The guide coordinates all of the elements of a kit. The guide contains an outline of the basic objectives of the unit in terms of "attitudes and values, knowledge and skills." A convenient chart is provided for scheduling the unit's work. Tests based on the material covered in the unit's work are included for appropriate grade levels.

The program is appropriate for inclusion in regular science, health and urban studies programs as well as for instruction in environmental science. The program is designed for use by the regular classroom teacher.

GOALS, EVALUATION DESIGN, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1

To develop students' knowledge of the biosphere and the ecological consequences of industrialization. Students will understand the social and legislative processes that can be used to effect action in pollution control.

Students who participate in the program in the first year will show an increase in knowledge measured by pre and post test significant at the .05 level when compared to scores of control groups.

For each unit of the program experimental and control classes are set up and given pre and post tests designed by the project staff. Results to date have shown that the post test scores, as compared to the pre test scores of the experimental groups, were all significantly higher at the .05 level or better. In comparing the post test scores of the experimental groups to those of the control groups, again there has been in every case a significantly higher gain in favor of the experimental classes. The units have been found effective in teaching the content that they were designed to teach.

Goal #2

To inform New Jersey citizens about the program and its evaluation. To offer to interested laymen and educators the opportunity to observe lessons in pollution control being taught, examine the materials, and obtain training in their use.

Evaluation will be carried out through responses of consumer districts to questionnaires on the use and impact of training.

COSTS

The Title III development grant has paid salaries and stipends to the development staff and the cost of some pieces of equipment which are required to produce photo-ready materials

for publication. The completed units developed by the project staff have been published as "Priority One: Environment" and are available for purchase from a commercial firm. Permission has been granted by the New Jersey Department of Education for the Union Township Public Schools to copyright the materials and receive the royalties from their sale. The royalties are being used to support the curriculum work of the Pollution Control Education Center.

Unit prices for the kits range from $90 to $125. Each kit provides one to two weeks of instruction for one class. The prorated per pupil cost for each unit of instruction can be figured to be 20¢ or less per pupil in a school of average size where the kits are used throughout the year. The materials in the kits are reuseable.

STATEWIDE DISSEMINATION PROGRAM

The project staff has been funded for 1973-74 to inform New Jersey citizens about the program and its evaluation. Visitors are welcome to the Union Township public schools to see the lessons being taught and examine the materials. During the summer of 1974 a two to three day workshop will be held in Union for persons who wish to be trained in the use of the materials.

There is no charge for the services of the project staff. Consumer districts are responsible for costs incurred by their staffs for training and the installation of the program. To be eligible for training, a district must show evidence of intent to use the information and willingness to answer questionnaires to evaluate the use and impact of the training.

The instructional units available are:

Recommended for Grades 4, 5, and 6 (published Spring 1973):

Air Pollution	Marine and Seashore Pollution
Solid Waste Management	Thermal Water Pollution
Water Pollution	The Great Swamp

Recommended for Grades 1, 2, and 3 (available Fall 1973):

Priority One: Environment	Level 1
Priority One: Environment	Level 2
Priority One: Environment	Level 3

Recommended for Grades 7, 8, and 9 (available Spring 1974):

The Energy Challenge	Protecting Our Water Supplies
The Urban Community	Open Lands and Wildlife
Air Pollution and Your Health	Community in Conflict

For further information about the project, please contact the project director. For information about the instructional units available, please contact the Science Product Manager of Webster/McGraw-Hill.

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Prescriptive Teaching Workshop

New Providence, New Jersey

OVERVIEW

The Prescriptive Teaching Workshop is designed to raise the academic achievement of elementary school students, grades 1 through 5, who are hampered by neurological, language, and perceptual-motor problems. A Prescriptive Teaching Workshop in each of four elementary schools accommodates seriously disabled learners for part of the day. At other times, these students work in regular classrooms with individually prescribed programs. Students whose disabilities are less severe work only in the regular classroom but follow especially prescribed programs. The project's goal is to maintain the disabled learner in the regular classroom situation. The project was developed through a Title III grant from 1969 to 1972. It now serves approximately 135 students per year. It is entering its second year as a demonstration site within the Title III statewide dissemination program.

The responsibility of coordinating, supervising, and evaluating the workshop program is that of the Director of Special Services. He interviews and recommends staff, specifies the physical requirements of the workshops, and secures volunteer para-professional help as may be needed. In New Providence, he also serves as chairman of the Child Study Team. The workshop operation is a cooperative effort of the Director of Special Services, psychologist, learning disability teacher consultant (LDTC), teachers of the handicapped, social worker, school principals, and classroom teachers.

Consultation and diagnostic services are offered to the teachers and students involved in the program by the psychologist. Working closely with the psychologist to secure social and medical development, is the social worker. This responsibility entails establishing a close relationship between home and school and conducting group orientation sessions with parents.

A Prescriptive Workshop teacher must be certified as a teacher of the handicapped. Ideally, this should be an experienced teacher who has taught in a regular classroom and is aware of pupil expectations and curriculum requirements. The background of a certified teacher for the Workshop should include course work in the areas of (1) education of the handicapped, (2) diagnosis of learning disabilities, (3) remediation of basic skills, and (4) materials and methods of teaching children with learning disabilities. This teacher is responsible for teaching approximately fifteen youngsters in academic and perceptual skills in small groups and prescribing their programs and evaluating their progress in cooperation with the classroom teacher. This also includes providing materials for use while these children are in regular classrooms.

Communications is the key to success of this program. Team planning of the Child Study Team, Workshop teacher, principal, and classroom teachers ensures continuous communication, provides inservice training, and encourages eventual total integration of the child into the regular classroom.

Communication is most important in the relationship between the Workshop teacher and the classroom teacher. After school conferences, team teaching, and Friday observations make this possible. On Fridays children do not attend the Workshop. This permits the Workshop teacher to observe these children and others in their own classrooms. It also enables the teachers to have a regular opportunity to discuss the progress and programs of each child. There are some children who will require assignments from the Workshop teacher to be completed in the regular classroom on Fridays using special materials. The Workshop teacher and the classroom teacher cooperate in marking quarterly report cards and meeting with parents.

The principal is involved in team planning with the Child Study Team, classroom teachers and Workshop teacher in the final selection of children for placement in the Workshop, in assigning children to regular classrooms and teachers best suited to meet their needs, and in planning children's schedules. Additional communications in understanding of special programs and needs is also provided through periodic meetings of principals and the Director of Special Services.

The Workshop accommodates the more seriously disabled learner in those areas which have proven to be frustrating in the regular classroom. At all other times the child remains in the regular classroom working on appropriate materials and using multi-sensory aids.

The children in the Workshop participate in physical education, music, art, and opening exercises with their assigned class. The purpose is to integrate them into the regular classroom whenever possible. This philosophy of mainstreaming the children into their grade level also applies to academics. For example, a child may participate in his classroom reading group and come to the Workshop for instruction in math and spelling. In another case a child may come to the Workshop for writing, perceptual skills, and work habits, while participating in his assigned classroom in all academic areas. The amount of time the child spends in the Workshop depends on his needs. The advantage of the Workshop over supplemental tutoring is that it affords the child a large block of time and a continuity of program.

No schedule is permanent; all schedules are altered as a child progresses. Children may be phased into regular classrooms throughout the year or may remain in the Workshop for several years. A child released from the Workshop may be subsequently scheduled for attendance if a later need arises. Remedial reading or supplemental instruction may be prescribed for a period of time to support children being released from the Workshop.

On the following page is a flow chart which illustrates the organization of the Prescriptive Teaching Workshop program.

STEPS IN SETTING UP PRESCRIPTIVE TEACHING WORKSHOP

1 **ASSESSMENT OF NEEDS**

- INVOLVING REGULAR CLASSROOM TEACHER
- SPECIAL CLASS TEACHERS
- CHILD STUDY TEAM, PRINCIPALS, SUPERINTENDENT, PARENTS

2 **DESCRIPTION OF FACILITY**

- RESEARCH OF ALTERNATIVE PROPOSALS

3 **ENLISTING SUPPORT OF ADMINISTRATION AND STAFF**

STRATEGIES:

- VISIT EXISTING WORK SHOP
- VIEW FILM STRIP – TAPE OVERVIEW
- READ TECHNICAL BRIEF
- READ RESOURCE MANUAL

4 **ESTIMATING COST OF STAFFING, TRAINING, MATERIALS & EQUIPMENT**

5 **SUBMITTING PROPOSAL AND BUDGET TO BOARD OF EDUCATION**

6 **HIRING WORKSHOP TEACHER**

- SUMMER TRAINING OF TEACHER
- IN WORKSHOP REPLICATION
- A PREREQUISITE

7 **IDENTIFICATION OF CHILDREN**

SCREENING PROCEDURE:

- TRAINING OF CLASSROOM TEACHERS
- REFERRALS
- EVALUATION
- SELECTION
- MEETING WITH PARENTS
- ASSIGNING TO CLASSROOM TEACHERS

GO TO STEP 8

8 **DEVELOPMENT OF TOTAL PROGRAM FOR EACH CHILD**

9 **SPECIFICATION OF MATERIALS, EQUIPMENT, PHYSICAL FACILITY**

10 **SCHEDULING CHILDREN'S PROGRAMS**

11 **WORKSHOP IN OPERATION**

12 **EVALUATION OF PERFORMANCE**

EVALUATION TECHNIQUES:

- PARENT CONFERENCES
- REPORT CARDS
- PRE AND POST ACHIEVEMENT TESTING
- ATTITUDINAL ASSESSMENT

13 **DISSEMINATION OF INFORMATION**

- WORKSHOP TEACHER COMMUNICATES WITH CLASSROOM TEACHERS, PRINCIPAL, CHILD STUDY TEAM AND PARENTS
- DIRECTOR OF SPECIAL SERVICES* COMMUNICATES WITH PRINCIPALS, SUPERINTENDENT AND PARENTS
- SUPERINTENDENT COMMUNICATES WITH BOARD OF EDUCATION, PUBLIC AND OUTSIDE AGENCIES

*CHAIRMAN CHILD STUDY TEAM

– IMPLEMENTATION SCHEDULE –

STEPS 1-5 BUDGET APPROVAL PREREQUISITES

STEPS 6-9 PRE-PERFORMANCE REQUIREMENTS

STEPS 10-13 WORKSHOP IN OPERATION

GOALS, EVALUATION DESIGNS, AND RESULTS

In accordance with ESEA, Title III requirements, the project staff specified development goals, selected evaluation designs, and evaluated progress toward the goals. It is anticipated that schools with similar populations can achieve the same results.

Goal #1

Significant reduction of the incidence of behavior associated with personal frustration in students with severe neurological impairment, perceptual-motor problems, and speech disabilities. Significant increase in the incidence of student success and adjustment.

Students receive a pre and post program interview by the same psychologist. Collateral interviews are held with teachers and parents. Student behavior is rated according to specific indices. These ratings are used to develop individually prescribed programs which students follow in a prescriptive teaching workshop and/or the regular classroom.

During the 1970-71 school year 76% of the students who used the Center (N=25) showed significant reductions in disruptive behavior, withdrawal, absenteeism, and failure to participate and interact. Significant gains were reported for 30% of these students in feelings of success and personal adjustment.

Goal #2

Improvement of students' previous growth rates in reading, arithmetic, and language skills. Reduction of retention rates and special class placements.

Pre and post California Achievement Test scores, ratings on the Wechsler Intelligence Scale for Children, and annual test data for students in previous special education classes over the past five years were used to measure and compare growth rates. Students in the program improved absolutely and comparatively. Twelve of the 25 students using the Center in 1970-71 successfully joined regular classes. Only one child was retained for social and physiological reasons.

Goal #3

Students whose learning disabilities are not severe enough for them to use a workshop will work in especially prescribed programs in the regular classroom and will improve in academic performance.

These students follow a prescriptive program designed by their teachers and a learning disability consultant. Tapes, audiovisual aids, programmed materials, listening centers, and controlled readers are among the supplemental materials used. The prescriptive programs are similar in content to the regular classroom material.

The post yearly academic achievement gain for the random sample of students tested was two months of .2 grade equivalent. For students in the program the average yearly achievement gain for reading, spelling, and arithmetic was five months or a .5 grade equivalent.

Goal #4

Teachers of grades 1-5 will improve their ability to identify students with special needs and design individual instructional programs for them.

Teachers attend inservice workshops. Special education and regular teachers work together to design instructional programs and materials for participating students. One day per week regular and special education teachers team teach in the regular classroom.

Principals agree that teachers' skills in identifying and working with these students have improved.

Six on-site evaluations by staff members of the Department of Education and the Union County Superintendent's Office confirm that this project is an excellent model to meet the educational, social, and emotional needs of certain handicapped children and to maintain them in the mainstream of the school system.

Goal #5: Statewide Dissemination

To inform New Jersey citizens about the program and its evaluation. In 1972-73 to train representatives of eight districts in the program's replication. In 1973-74 to train representatives of ten districts. Evaluation will be made through responses of consumers to questionnaires on the use of the training and its impact in the consumer districts.

In 1972-73 the training was carried out. Evaluation will take place in 1973-74.

COSTS

The basic costs of introducing this program into a school system are those of equipping a workshop with materials and providing an inservice program for staff. Based upon the New Providence experience workshop's first operational year will cost about $20,000. The cost breakdown is:

Salary of workshop teacher	$8,880
Inservice teacher training	1,000
Instructional materials and supplies	5,500
Equipment	4,500
Orientation of parents	250
	$20,130

One workshop serves approximately fifteen students. Instructional materials and equipment will be used over a number of years. Some of the required materials may be found in many districts.

Each learning disabled child is provided an average of two hours of instruction daily in the Workshop. Prior to the Workshop the district had provided two hours of supplemental instruction per child per day in order to remediate skills. For fifteen children at $7 per hour, the cost of

supplemental instruction was $1,050 per week or $39,900 per year. The cost of implementation of the Workshop for the first year was $20,130. The average per pupil cost was reduced from $2,666 for supplemental instruction to $1,342 for the Workshop.

The State of New Jersey provides that 50% of all expenditures for special education programs and 75% of transportation costs of handicapped children are reimbursable. The Workshop qualified as an approved, reimbursable facility for handicapped children.

STATEWIDE DISSEMINATION PLAN

The project has been funded by Title III for 1973-74 to offer dissemination services and materials to New Jersey citizens. One day per month is set aside for visitors to the Workshops. General information is available free of charge. A filmstrip describing the program may be borrowed. A Resource Manual which explains the project in detail is available. The project disseminator is available to visit districts to explain the program.

The project staff will offer two full-day training workshops for those interested in adapting or adopting its ideas. One workshop will be in the winter; the second in the spring. In addition, there will be a three day training workshop in the summer, 1974. All workshops will be held in New Providence. There is no charge for the services of the project staff. Schools or districts being trained are responsible for costs incurred by their staffs for training and installation of the program. To be eligible for training a district must show evidence of intent to use the information and willingness to answer evaluation questionnaires. Inquiries about the project and its dissemination plan should be made in writing to the project disseminator.

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SEE: Specific Education of the Eye

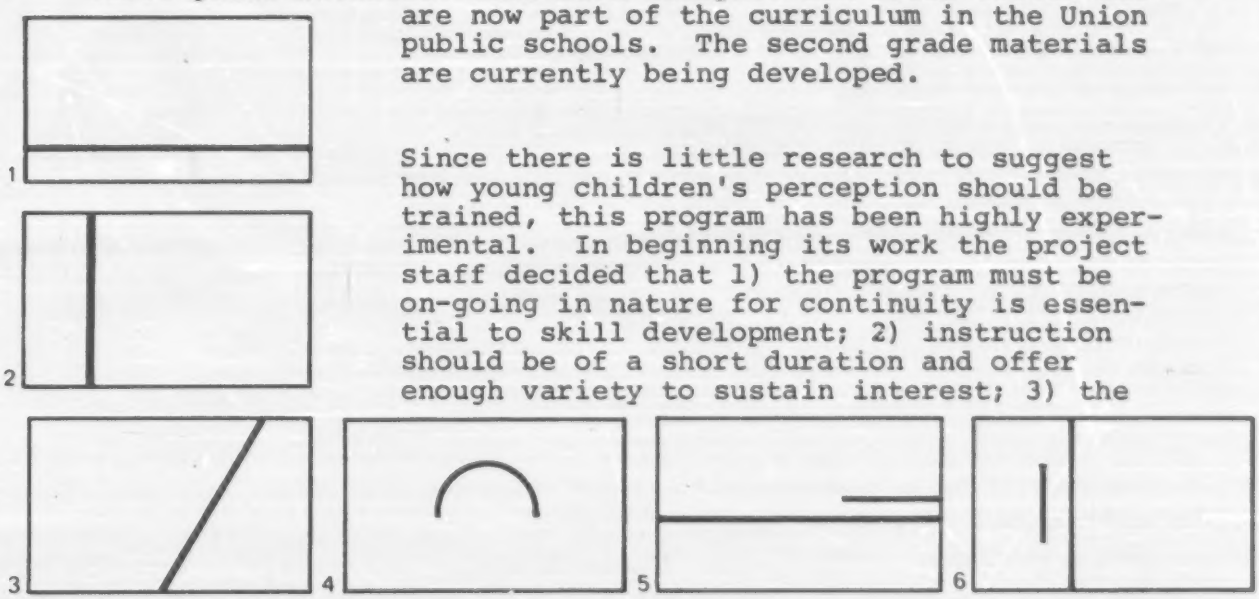
Union, New Jersey

OVERVIEW

Our population is visually illiterate. Most people are not trained in the skills of seeing. They are unable to perceive fully what they see. Their vision is general rather then specific; thus they perceive only the obvious and usually miss the subtle nuances and relationships which define the uniqueness of an experience. Since awareness precedes learning, the lack of perceptual ability is a deterrent to learning. Project SEE is designed to offset this perceptual hiatus by developing in children the visual skills, and physical and mental discipline requisite to significant, meaningful learning.

The Project SEE staff is now in its third year of developing a program to train the perceptual and analytical skills of elementary school students. The kindergarten and first grade materials have been designed and field tested and are now part of the curriculum in the Union public schools. The second grade materials are currently being developed.

Since there is little research to suggest how young children's perception should be trained, this program has been highly experimental. In beginning its work the project staff decided that 1) the program must be on-going in nature for continuity is essential to skill development; 2) instruction should be of a short duration and offer enough variety to sustain interest; 3) the

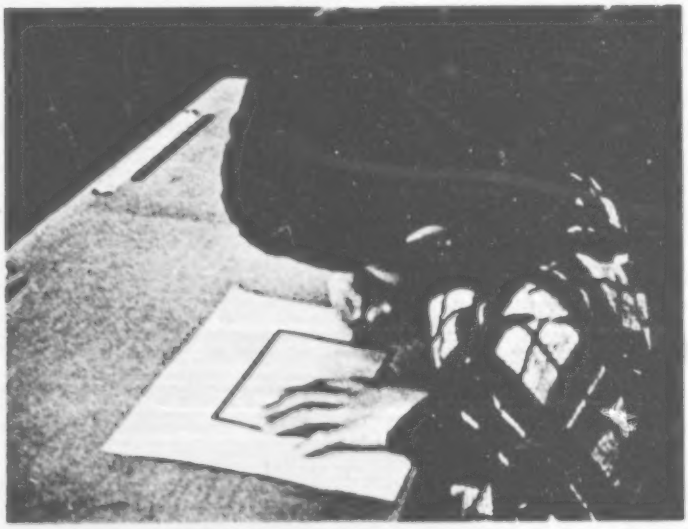


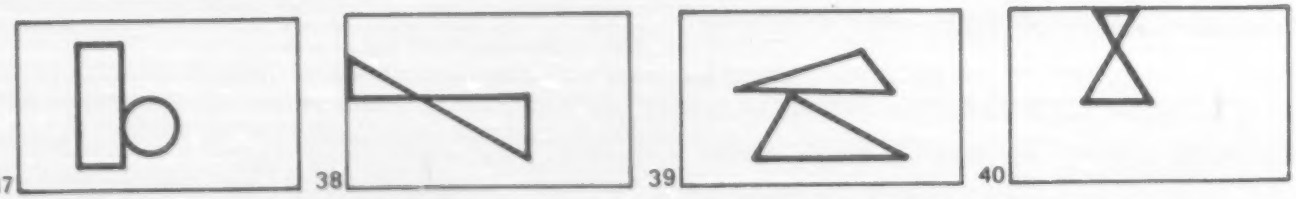
Beginning Visuals of the Kindergarten Program

information had to be internalized by the children rather than given to them by the teacher; 4) the approach should be multimodal and multisensory for the total development of the child; and 5) the program should be introduced at the earliest possible time, preferably in kindergarten.

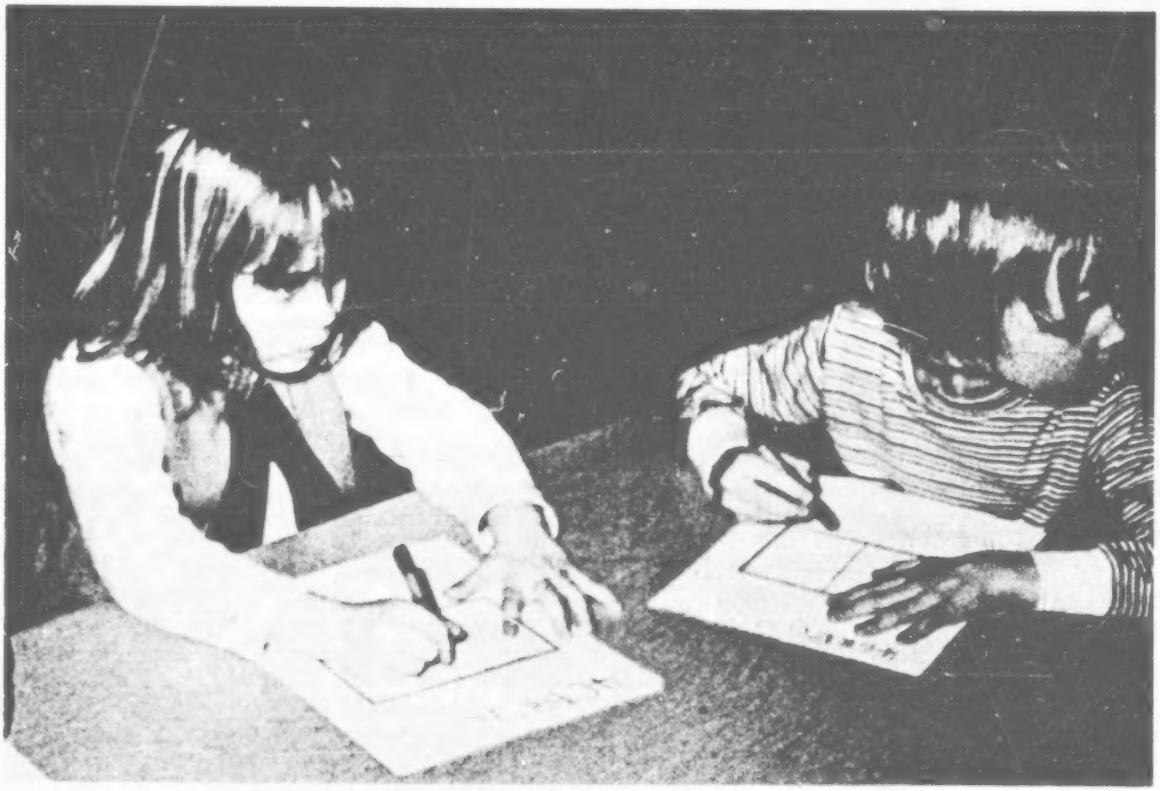
The Project SEE lessons are taught by classroom teachers for approximately fifteen minutes each day. The lessons are a series of visuals of which one is introduced in each lesson. The students analyze the visual and its contextual relationships, identify objects in the immediate environment which contain elements of the visual, and replicate the visual. A review lesson takes place at the completion of every four visuals.

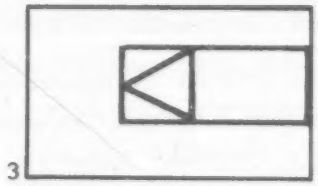
For the kindergarten program there is a series of forty visuals. They start with the most elementary single line element and progress to two noninteracting lines, two interacting lines, elements made up of three components, simple shapes, shape-line combinations, and shape-shape combinations. The elements of each visual are placed in a frame so that the students see them as part of a greater totality and analyze them with reference to their position in the frame.

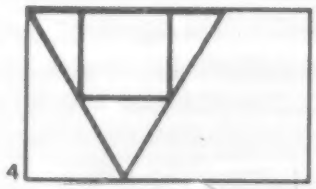




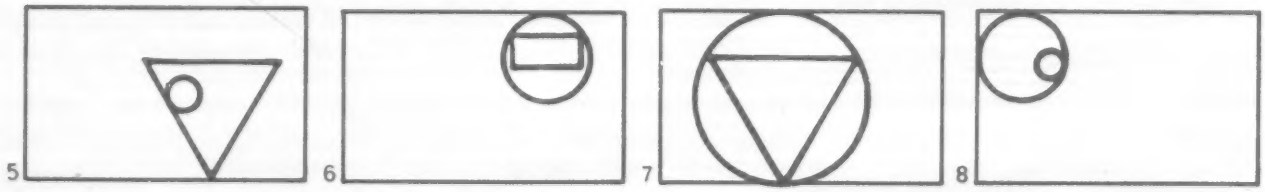
Final Visuals of the Kindergarten Program





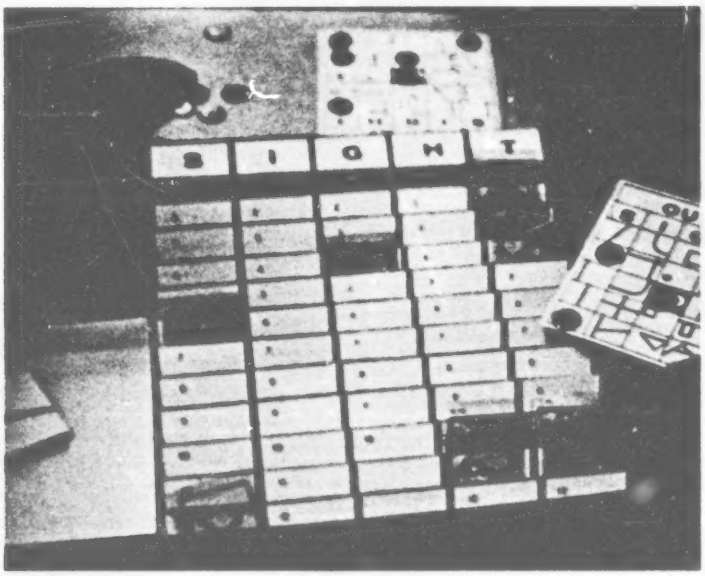


The thirty visuals for the first grade program contain more difficult and complex elements. Students begin with a review of the last ten visuals of the kindergarten program and then progress to shape within shape combinations, shapes intersecting and overlaping other shapes, and shapes juxtaposed to give the illusion of a third dimension. The students describe the visuals, relate them to the environment, and replicate them as was done in the kindergarten program.



Beginning First Grade Visuals

The project materials include an enrichment game called "Out of Sight". The game is played like Bingo but each space on a student's game card contains a visual similar to those used in the lessons. The teacher is supplied with a set of overhead transparencies of the visuals which she projects, calling out the letter under which the visual might be found. The letters at the top of each game card are S-I-G-H-T. Those who have the visual which the teacher displays cover it on the card. The first one to complete a vertical, horizontal, or diagonal line calls, "Out of Sight!"



GOALS, EVALUATION DESIGNS, AND RESULTS

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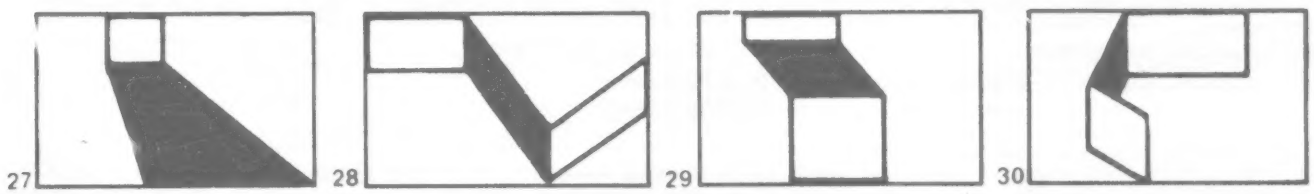

Final First Grade Visuals

Goal #1

Students in the experimental classes will show significant growth in their specification of vision, i.e. the ability to physically focus and mentally concentrate, leading to increased awareness of the nature and characteristics of objects which they observe.

Goal #2

Students will become significantly more aware of the relationships of objects to their environment. This GESTALT awareness will be manifested in the analysis of the size, shape, color, and spatial orientation of that which is observed.

Goal #3

The controlled visual and physical activities required by the program will bring about significant improvement in the students' hand-eye coordination and manual dexterity.

Goal #4

The skills and attitudes engendered by the program will serve as the foundation for the development of the process of learning.

Goal #5: Statewide Dissemination

To inform New Jersey educators about the program and its evaluation. In 1972-73 to train staff members of twenty-five schools or districts to use the program's kindergarten materials. In 1973-74 to train staff members of fifty schools or districts to use the program's kindergarten and first grade materials.

In the program's first year there were two experimental and two control kindergarten classes. Pre and post testing were carried out with the Simkov Perceptual Organization Inventory and the Knobler Perceptual Development Series, Tests 1, 2, and 3. The latter series was designed by the project staff. In comparing mean scores of the four pre tests the students in the control classes achieved higher scores than those of the experimental classes on three of the four tests. Post testing indicated significant growth

by the students in the experimental classes and an obvious though minimal regression on the part of those in the control classes. Comparisons of mean scores placed the students in the experimental classes higher than those in the control classes on all four tests.

In the program's second year testing was carried out in control and experimental classes in both kindergarten and first grade. In kindergarten there were two control and two experimental classes. Students were pre and post tested with the Knobler Perceptual Development Series. Comparison of the post test means of the experimental and control classes showed that the scores of the experimental classes were greater than those of the control classes. The difference was significant at the .001 level.

In the first grade there were also two control and two experimental classes. Students were pre and post tested on the Knobler Perceptual Development Series. Comparisons of the mean scores on the post tests show that the students of the experimental classes scored higher than those of the control classes. For Test #1, the difference was significant at the .01 level; for Test #2, the difference was significant at the .05 level; for Test #3, the difference was significant at the .10 level.

Evaluation of the statewide dissemination program is being carried out through an analysis of the responses to questionnaires on the impact and use of training. In 1972-73, the program was introduced into kindergartens in forty districts. Evaluation of the impact of the program will take place in 1973-74.

Anecdotal comments of teachers who are using the program give evidence of the way in which it fosters skill development among students. Kindergarten teachers have said: "We find that the children's motor control and visual conceptualization have advanced to the point that they may be considered atypical... that the children have become more articulate with vocabulary and descriptive powers beyond those normally expected of kindergarten children... that the children's attention span and abilities to respond to directions have increased."

First grade teachers have commented, "The children verbalize the kinds of lines that letters and numbers are

made of and they find it easier to write them... they can sit for longer periods of time and work to completion of activities... In general the children became more observant of details in stories and in analyzing pictures... more aware of their environment as a whole, including lessons in other curriculum areas."

COSTS

The bulk of the Title III development grant is for staff salaries. The costs of introducing the program into a classroom are those of the materials and staff training. The materials are available at cost from the project staff. The kindergarten materials including the "Out of Sight" game are $15. The first grade materials are the same price. The Union Board of Education holds the copyright to the materials. The training program provided by the project staff is a half-day in duration.

STATEWIDE DISSEMINATION PLAN

The project staff has been funded by Title III for 1973-74 to inform New Jersey citizens about the program and its evaluation. Visitors are welcome to see the SEE lessons being taught in Union. General information about the project is available free of charge.

The project staff offers training to those who wish to introduce the program into another district. Training is a half-day (2 1/2 hours). It will be conducted in Union or in another school or district if at least ten persons plan to attend. There is no charge for the services of the project staff. Consumer districts are responsible for costs incurred by their staffs to attend the training workshop and to introduce the program. To be eligible for training the staff of another district or school must give evidence of intent to use the training and to respond to questionnaires to evaluate its use and impact.

For information about the project and its dissemination plan, contact the project director.

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